POSITIVE EMOTION AND INGRATIATION STRATEGIES IN FEMALE ADOLESCENTS

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ABSTRACT

While the relationship between the expression of positive emotion and likability has been established, the relationship between the expression of positive emotion and the experience of positive emotion during the employment of ingratiation strategies is unclear. In the present study, this relationship was investigated in a sample of adolescent females, aged eleven to eighteen years. After either a positive or neutral mood induction procedure, participants were instructed to ingratiate themselves with a confederate. Participants' positive emotional expression and likability were rated by themselves and by the confederate after the interaction. In addition, participants listed their thoughts and feelings while planning their ingratiation strategies, and again after the interaction. Each interaction was videotaped and subsequently rated by an independent observer. The relationship between experienced and expressed emotion was posited to be a function of, among other variables, positive emotional states occurring during social interaction, the self-regulation of emotion and cognitive developmental factors. The main empirical results of this study can be as summarised as follows: the mood induction procedure was successful; the mood of participants in the neutral mood condition became elevated during the interaction task; the measure of positive emotion expression predicted liking for all three raters; both the confederate and observer rated the older participants higher than the younger participants on the expression of positive emotion; the consensus between participants' self-ratings of positive emotion expression and the confederate and observer's ratings of the same was lowest in the youngest age category and higher in each older category. Some of these results are consistent with other studies of ingratiation, while other results clarify relationships that have not hitherto been investigated. Results are discussed in terms of intra- and interpersonal processes, and an integrated explanatory model of the ingratiation system is developed. Implications of this study are discussed with reference to future research.

1. INTRODUCTION

The secret of life is never to have an emotion that is unbecoming.
- Oscar Wilde, *A Woman of No Importance.*

The study of self-presentation, or impression management, strategies has long held the interest of theorists and researchers in social psychology (Gordon, 1996). Jones and Pittman (1982) proposed that self-presentation involves an actor's shaping of his or her responses to create in specific others an impression that is, for one reason or another, desired by the actor. They maintained that most of these reasons can be subsumed under an interest in augmenting or maintaining power in a relationship, and therefore re-defined strategic self-presentation as those features of behavior affected by power augmentation motives designed to elicit or shape others' attributions of the actor's dispositions. Five classes of self-presentational strategies have been proposed by Jones and Pittman, namely: ingratiation, intimidation, self-promotion, exemplification and supplication. Since ingratiation is a specific form of self-presentation, they defined ingratiation as an attempt to induce the attribution of liking in the target.

1.1 Part One: Ingratiation and emotion

1.1.1 Ingratiation as a self-presentational strategy

The ubiquitous nature of ingratiation (Fiske & Taylor, 1991; Gordon, 1996; Jones & Pittman, 1982) has made it an important research topic, and various factors that make people likable to others have been researched. For example, people who display consistency in their beliefs and their behavior are considered more likable than those who do not (Tedeschi, Schlenker & Bonoma, 1971); people who conform to situational norms are considered more likable than those who do not (Alexander & Knight, 1971); people who use indirect flattery, for example, imitating others, talking about their favourite topics, even simply paying attention to them and using their names, are considered more

likable than those who do not (Schlenker & Goldman, 1982); people whose verbal and nonverbal behaviors match are considered more likable than those whose verbal and nonverbal behaviors do not (DePaulo,1992); those who express positive emotions, for example, happiness, are considered more likable than those who express no particular emotion at all (Clark & Taraban, 1991).

It is the last of these factors that forms the focus of the present research. The use of positive emotional expression as an ingratiation strategy has received some research attention (Baumeister, 1982; Clark, Pataki & Carver, 1996; DePaulo, 1992; Fiske & Taylor, 1991; Forgas, 1996; Hochschild, 1983). However, an immediate problem arises from this area of research. Researchers contend that people who are warm, understanding, happy, compassionate, reliable and charming are likable (Clark et al 1996; Jones, 1990; Jones & Pittman, 1982), but there is some sliding between the possession of such attributes or emotional states and their expression. For example, Clark et al., (1996) state, "people do like others who are *feeling* happy more than they like those *expressing* no particular emotion" (p. 249, emphasis added). The implicit assumption in this statement is that feeling happy is the same as expressing happiness. However, experimental evidence shows that expressing an emotion does not necessarily entail the experience of that emotion (e.g., Wagner, Buck & Winterbotham, 1993). Wagner et al. found that happiness and interest are often mentioned in self-reports and displayed in expressive behavior, but that these reports and expressions are not necessarily related to the subjective experience of these emotions. In other words, it is possible to appear happy while not necessarily feeling happy, and there is an important distinction to be made between the experience and expression of emotion.

On the other hand, those researchers who support the Facial Feedback Hypothesis, including Buck (1980), Cappella (1993), Laird (1984), and Winton (1986), would claim that muscular/neurological feedback from facial expressions influences both emotion and cognition. Evidence for a causal link between the facial expression of positive emotion and the subsequent

experience of that emotion has been provided by many researchers, including Adelman & Zajonc (1989), Cappella (1993) and Hess, Kappas, McHugo and Lanzetta (1992). Laird (1974) showed how posed smiles (even when the person is instructed to adopt a particular set of facial postures without using the word "smile") lead to more positive evaluations of humor in cartoons. Whether there is a direct relationship between facial expression and emotion (Izard, 1977), or whether that relationship is mediated by cognition (Laird, 1984), the facial feedback hypothesis proposes a causal link between the expression of an emotion and the experience of that emotion. Cappella (1993) found that partners in an interaction imitate each other's smiles, and that there is an independent effect of a person's own smiles on his or her own attraction to the partner. So, feeling positive, via facial feedback from smiling, affects the way that one views the attractiveness of others. Cappella (1993) proposed the existence of a causally related expressive and experiential emotional subsystem within each person. When two persons are involved in social interaction, an affective loop is created between the people, involving the subsystems of both. For Cappella, the reciprocal imitation of facial expression provides the link between the two subsystems in a dyad.

The research on the links between experienced and expressed emotion in social interaction is sparse and, thus, the present research investigated the relationship between experienced and expressed positive emotion in participants engaged in an ingratiation task. Participants were presented with an ingratiation task in which they were instructed to try and get another person to like them without making this goal explicit. By using mood induction techniques, it was possible to investigate the effects of participants' mood on their perceptions of how much a stranger liked them, and how much the stranger did actually like them. In addition, it was possible to investigate the relationship between expressed and experienced emotion during the ingratiation task.

1.1.2 The relationship between expressed positive emotion and liking

The link between expressed positive emotion and being liked has been clearly established. There is much evidence to suggest that people who express positive emotion are more likable than those who express negative emotion, even in situations where perceivers are simply given information about others (including their emotional state), rather than actually engaging in an interaction, and asked to make judgements of liking (Clark & Taraban, 1991; Forgas, O'Connor & Morris, 1983; Shaver, Schwartz, Kirson & O'Connor, 1987; Sommers, 1984). Relatedly, anxiety and depression compromise the expression of positive emotion, and diminish liking (see summary of evidence in Fiske and Taylor, 1991). An experiment by Berry and Hansen (1996) investigated the relationship between the experience of positive emotion and liking. Dyads of strangers (undergraduate women) were videotaped while they were alone together in a waiting room. The participants immediately evaluated the interaction with reference to positive affective dimensions, for example, enjoyment, relaxed, pleasant, satisfying and liking. Significant correlations were obtained between members' ratings of the affective dimensions. Participants also rated themselves on the Positive and Negative Affect Schedule (PANAS), from which the experimenters obtained a score of trait positive affect (PA) for each participant. Participants' PA levels were positively and significantly related to both self and partner ratings of the quality of the interactions in which they engaged. Interactions involving high PA individuals were evaluated more positively by independent observers than were interactions in which low PA participants took part. High PA individuals perceived their own interactions to be more enjoyable, comfortable and pleasant than did low PA people. Participants' level of PA predicted their partners' evaluations as well as impressions of their videotaped interactions provided by judges who were not acquainted with them. While this study examined the relationship between self-ratings of positive affective experience (PANAS) with the positive qualities of social interaction including liking, there were no ratings taken of the emotional expressions produced by the participants. It would have been interesting to know whether, if participants had rated each other on dimensions of positive

affect, these ratings would have correlated positively with participants' self-ratings of positive affective expression and ratings of liking. Knowledge of such a positive relationship would help to clarify the relationship between experienced and expressed emotion in social encounters.

Jones and Pittman (1982) and Jones (1990) contended that people like others who possess such positive attributes as warmth, understanding and compassion and proposed that positive emotional cues to such attributes as warmth, humour, reliability and charm make people likable. However, the possession of such attributes needs some expression for others to know that they are present, since perceivers cannot infer the presence (or absence) of these attributes without cues to their presence. Perceivers infer that actors possess these positive attributes (or do not possess them) from the verbal and non-verbal cues provided by the actors. The available information about another's emotional state is usually in the form of the other's appearance and behaviors, and from these cues perceivers can make inferences about the mental states and dispositions of others. For example, Planalp, DeFrancisco and Rutherford (1996) found that people use a variety of cues to detect and identify emotion in others, including vocal cues, facial cues, indirect verbal cues and direct verbal cues (noted in their study as being very rare), body movement or position, physiological cues like rapid breathing or crying, cues based on the context in which the emotion occurred, and trait cues. Further, a variety of particular cues are associated with particular attributes, for example, smiling is associated with a friendly attitude (Van Hooff, 1972); certain facial expressions are associated with confusion (Allen & Atkinson, 1978); hand movements, eye contact and mouth movements can be used as cues to anxiety (Waxer, 1977), and accurate inferences about emotional states and personality traits can be made from non-verbal cues (Cunningham, 1977; Edelman & Hampson, 1981; Scherer, 1986; Zuckerman, Larrance, Hall, DeFrank & Rosenthal, 1979). Clearly, people can use verbal and non-verbal cues from which to infer the emotional states and personality traits of others, and the detection of cues associated with positive emotion in an actor leads to increased liking by the perceiver. That is not to say

that there is a one-to-one relationship between expressions and emotions, but only to suggest that emotional cues are used in the inferences that people make about the emotional states and traits of others.

If it is only by the expression of emotion cues that actors are able to inform others of their own emotional experience, then the level of expression must play a part in this transfer of information. When emotion cues are very subtle or difficult to detect, the perceiver will have trouble identifying the emotional state of the actor. It is, therefore, not surprising that expressive people are liked better than unexpressive people (DePaulo, 1992). This is a highly replicable finding, which has been documented for people who are spontaneously expressive (Sabatelli & Rubin, 1986), for those who are skilled at posing nonverbal expressions (Friedman, DiMatteo & Taranta, 1980), for those who describe themselves as emotionally expressive (Friedman, Riggio & Casella, 1988) or as extraverted (Riggio & Friedman, 1986), for people who are from expressive families (Halberstadt, 1984), and for people who have expressive facial features (Cunningham, 1986). Expressive people also appear more attractive than unexpressive people (DePaulo, Blank, Swaim & Hairfield, 1992; Friedman et al, 1988; Larrance & Zuckerman, 1981; Riggio, 1986; Sabatelli & Rubin, 1986).

In attempting to relate expressive behaviors to impression management strategies, Jones and Pittman (1982) made the point that it is unlikely that there is a given response set that is intrinsically or universally self-presentational. They summarised actions that are relatively unmotivated by concern about others' impressions as follows: those behaviors that are task-centred (that is, being engrossed in the task, the actor is unconcerned with the responses of perceivers); that are spontaneously expressive (at, or near the moment of their experience, anger, mirth or joy may overwhelm the concerns of impression management); that are normatively ritualised (actors may forego the self-presentational possibilities of routine exchanges, for example, checking out library books or buying groceries); or that are deliberately self-disclosing (for

example, therapy sessions or intimate relationships). A feature of behaviors typically associated with ingratiation is interest in the other person, cued by smiling, leaning forward, or asking about the other. It is by no means implied that strategic self-presentational features are necessarily false, distorted or seriously discrepant from the phenomenal self. Jones and Pittman argued that such features typically involve selective disclosures and omissions, matters of emphasis and toning rather than of deceit or simulation. Similarly, DePaulo (1992) proposed that people edit the images of themselves rather than attempt to portray images that are totally uncharacteristic of themselves.

Jones and Wortman (1973) called ingratiation behaviors "illicit" because they go beyond routine politeness or mere obedience to the social norms that govern civil discourse. While these behavioral features are labelled "ingratiation", the perception by a target of ingratiation that these features of behavior are being deliberately performed for the purposes of ingratiation defeats their purpose. Ingratiation that becomes entirely transparent is not successful in increasing a target's liking for the ingratiator. In a substantial meta-analysis of ingratiation studies, Gordon (1996) found a negative correlation between transparency and the effect size of ingratiation techniques, supporting the idea that increased transparency decreased the success of ingratiation. Thus, the ingratiator has a dilemma - how to ingratiate oneself with another person without their realising that one is doing so. The target also has a dilemma - whether to accept the ingratiator's positive expressions as genuine or to suspect that they are exaggerated in an attempt to make the target like him or her. Successful ingratiation depends, to a large extent, on the ability of the actor to express enough positive emotion to enable the target to pick up the cues, while ensuring that the expression is suitably titrated to prevent detection of an obvious strategy. The dilemmas of both parties produce what Jones and Wortman (1973) called the "autistic conspiracy". A tantalising conspiracy of cognitive avoidance is common to ingratiators and their targets. The actors do not wish to see themselves as ingratiating; the target also wants to believe that the ingratiator is sincere. In order to investigate the tendency of

targets to believe that the ingratiator is sincere, experiments summarised in Jones and Wortman (1973) compared the reaction of those who were the targets of ingratiation attempts with those who were bystanders or observers. Such comparisons invariably showed that the targets of ingratiation strategies were more likely to consider such tactics authentic than were those bystanders for whom the particular ingratiating overtures were not intended, supporting the notion that the target of ingratiation wants to believe that the ingratiator is sincere.

In spite of the assistance of the autistic conspiracy in ingratiation strategies, evidence that people who express positivity are more likable to others than those who do not, suggests that it might be an effective strategy to express positivity in order to be liked. Jones and Pittman (1982) proposed that people know that the expression of positive emotion usually makes one likable. To provide support for the proposition that people deliberately attempt to present themselves as positive when trying to get others to like them, Clark (1993) gave participants the task of getting another person to like them as much as possible. Participants were asked to fill out a background form for the other person; included in this form was a indicator of mood. Results indicated (when compared with the baseline mood rating taken before the experiment) that participants exaggerated their positive mood on the form, possibly attempting to portray positivity to the target person in order to be liked.

Similarly, in one condition of a study that attempted to distinguish ingratiation strategies from self-promotion strategies, Godfrey, Jones and Lord (1986) instructed participants to try and make another person like them during a social interaction. The researchers asked the participants to write down the strategies they would use in this ingratiation task. The strategies judged by participants to be the best for being liked almost invariably included showing interest in the other person and drawing the person out, displaying such positive "approach" gestures as smiles, nods and eye contact; and displaying such positive emotions as warmth, compassion and cheerfulness. Later, these

researchers asked participants to list the strategies they had planned and those they had actually used in an attempt to get another person to like them. The researchers had independent raters rate the participants for those behaviors they had planned to employ. The results showed that participants had done what they said they would do. They nodded, smiled and gazed at the other person, and questioned, encouraged, agreed with, flattered and complimented the partner, these actions all being interpreted as signs of warmth and compassion. These behaviors correlated positively with the targets' liking ratings. While the two last-mentioned studies investigated the expressions of emotion employed by participants during an ingratiation task, the relationship between the expression of such positive emotions as happiness, warmth and compassion and the emotions experienced by the participants at the time were not investigated. It would have been interesting to know what emotional states accompanied those emotional expressions, and whether congruence between the two would have made any difference to the liking ratings of the targets.

In contrast to the deliberate expression of positive emotion in the above studies, an experiment by Erber, Wegner & Therriault (1996) found that participants attempted to neutralise their emotions (the participants had either a happy or sad mood induction) in anticipation of a social interaction. However, this study has some limitations in its interpretation of results. First, the Erber et al. study did not include an actual interaction, but merely presented participants with the anticipation of an interaction. Second, the anticipated interaction in the Erber et al. study was a task in which the participants would have to work with another person, not get another person to like them. It could be argued that the attempt to neutralise positive mood by these participants was in preparation for the anticipated task rather than the anticipated social interaction.

Implementing these ingratiation strategies effectively (achieving the goal of being liked) is dependent on a number of factors, including cultural and situational constraints, knowledge (implicit or explicit) of the relationship

between nonverbal behaviors and internal states, the range of expressive cues that a person can command (which will depend to some extent on maturational status), personal style, and motivational constraints (DePaulo, 1992). Obviously, there are factors related to the target that will also influence the success or failure of ingratiation strategies. The sensitivity of the target to these ingratiation behaviors must play a part in the success or failure of the ingratiation strategy. This sensitivity will depend on a number of factors including the degree of autistic conspiracy (described above), motivation, knowledge of the relationship between nonverbal behaviors and internal states, and personality factors. For example, a person who is hypervigilant for signs that others are rejecting them will selectively attend to those cues that will confirm their fear. It appears, then, that the transparency of ingratiation strategies depends on factors pertaining to both the ingratiator and the target.

Whatever the target's particular sensitivities, he or she must believe that the actor is behaving in that positive way because they genuinely feel that way - not because they want something from the target (e.g., approval or liking). If the target suspects that the actor's positivity is an ingratiation strategy, the actor's motives are likely to be questioned, and liking decreases. On the basis of research summarised by Jones and Wortman (1973), one possible cue to ingratiation is the expression of a positive emotion that is judged to be excessive given the particular situation. For example, Godfrey et al (1986) found that unsuccessful ingratiators either suffered from the overemployment of obvious tactics like blatant flattery, or were awkward or tentative in their attempts to ingratiate themselves, making their ingratiation attempts transparent. These findings suggest that it is important for the target to believe that the ingratiators' motive is to present themselves honestly, not to disguise what they really feel in an attempt to fool the target.

1.1.3 The relationship between experienced and expressed emotion in ingratiation

One factor that may contribute to the transparency of ingratiation is a discrepancy between the emotion one is expressing, and the emotion one is

feeling. Wegner and Erber (1993) cited evidence from James (1890), Klinger (1982) and Vallacher (1993) to support their assertion that people do try to achieve behavior-compatible states of mind in social settings in order to make the task easier and to be convincing. They asserted that people anticipate cross-fertilisation between covert processes of thought, emotion, and motivation on the one hand, and overt processes of talk, non-verbal expression and action on the other. Social strategies that involve any sort of deception will entail manipulating one's mental states so as to remain at least superficially consistent with the intended message. The authors referred to Stanislavski's (1965) "method" acting, and suggested that people do what they can to experience the inner states from which social behavior seems to radiate. The great acting teacher and director recommended that, in order to be convincing in a role, the actor must live the part by actually experiencing feelings that are analogous to the role. He exhorted his students to evoke emotional experiences within themselves in order to make their emotional portrayals authentic. Jones (1990) claimed that, if one wants to flatter another person, it is necessary to convince oneself that the person at least falls within the general range of those to whom such flattery is due. In like manner, Wegner and Erber (1993) claimed that some inward experience of what people do is necessary to make their self-presentations effective, and they quoted Carnegie's (1936) memorable advice on how to win friends and influence people - become genuinely interested in other people. Damasio (1994) suggested that, in order to produce a convincing positive emotional expression (for example, smiling in front of a camera), it is necessary to experience positive emotion; the author recommended asking someone to tell a good joke or else learning how to employ the technique taught by Stanislavski.

Experimental evidence for the use of this technique in everyday social interactions is sparse. In trying to account for the lack of empirical work in this domain, Jones (1990) suggested that, while there is a tendency for people to acknowledge that others are engaged in ingratiation strategies, they are reluctant to admit that they engage in such strategies themselves. He claimed

that researchers are not likely to gain much insight into ingratiation strategies by asking people about their own strategies because of this reluctance to admit to the use of them, and because, most of the time, these strategies are employed in a nonconscious way. Schlenker and Weigold (1992) acknowledged that ingratiating overtures are rarely the result of conscious or deliberate tactical planning, and evidence for relatively automatic, nonreflective and habitual impression management comes from Cheek and Hogan (1983), Jones (1990), and Paulhus (1988). This relative automaticity would make it difficult for people to articulate the strategies by which they ingratiate themselves to others.

However, there is some experimental evidence to support the notion that people deliberately try to get into moods that will facilitate their social interactions by making their moods congruent with the task at hand. This applies to various social tasks; for example, Wegner and Erber (1992) provided evidence that people try to attenuate both positive and negative moods in certain social situations as follows: O'Neal and Taylor (1989) angered participants and then told one half that they would have a chance to retaliate and the other half that they would not have that chance. Those people who were preparing to retaliate preferred to watch aggressive videos and those who were not going to retaliate preferred to watch humorous videos. The authors inferred from these choices that those who were going to retaliate chose to watch aggressive videos in an attempt to foster or maintain the feelings necessary to get even. Conversely, those with no chance for retaliation were thought to have chosen humorous videos in an attempt to rid themselves of the hostile feelings for which they had no use; Tesser, Rosen and Waranch (1973) found that the mood of participants who had to transmit bad news became more unpleasant as the interaction approached, while the mood of participants who had to transmit good news became more pleasant. These authors concluded that people attempt to generate an emotional state congruent with the message they have to convey.

In addition to laboratory studies, there has been some fieldwork carried out in this area, which has increased the ecological validity of claims about the congruency of emotional experience and expression in ingratiation tasks. For example, Hochschild (1983) conducted extensive research into the recruitment, training, and practices of flight attendants with two major airlines in the United States. She also conducted extensive, open-ended interviews with these flight attendants and observed them at work in his attempt to investigate the self-management of emotion when people are attempting to ingratiate themselves with strangers. Airline attendants try to present themselves as warm and positive, irrespective of their personal emotional experience. Hochschild found that, as one strategy for evoking that warmth when dealing with passengers, attendants were encouraged to think of the passenger as a personal guest at home and treat the passenger as such. By the same token, the injunction to act as if the cabin were home obscures crucial differences between home and an airplane cabin: home is safe, home does not crash. It is the flight attendants' task to convey a sense of relaxed, homey cosiness, and when these staff members conjured up the experience of warmth and safety at home, the passengers responded positively to them, trusting that they were portraying their genuine feelings. Relatedly, Parkinson (1991) found that hairdressers learn to manufacture positive emotion that makes their positive interactions with their clients more effective. Trainee hairdressers reported that they "put on an act" to make their clients like them, while more experienced hairdressers reported that they had learned how to feel positive in order to make their positive overtures to their clients more effective. In this way, the experience of an emotion by the ingratiator makes the target believe that the ingratiator is sincere in his or her emotional expression. While it may be argued that experiencing an emotional state congruent with the emotion being expressed is necessarily sincere, it is the motivation behind the behavior that makes it ingratiating, not an incongruence between experienced and expressed emotion. When a person is trying to get someone else to like them, incongruence between the expressed and experienced emotions can serve as a cue to the motivation behind the actions. So, the evidence from these studies suggests that, in order to

appear genuine in one's attempts to be positive towards others, one ideally would like to attain a state of thought, emotion or desire that is entirely compatible with what one must do in the social setting.

Studies in various other sub-disciplines of psychology have investigated the effects of mood on task performance, and their results suggest that successful task performance is dependent, to some extent, on congruent emotional experience. Kavanagh and Hausfield (1986), in an experiment with undergraduate athletes, showed that experimenter-induced positive mood improved physical performance and experimenter-induced sadness decreased physical performance. Relatedly, Kerr and Cox (1991) found that successful squash players were able to self-induce positive mood and minimise negative feelings, whereas unsuccessful players were not able to regulate their emotions as effectively. In assessing the effects of mood on cognitive tasks, Mayer and Bremer (1985) showed that performance on some cognitive and psychomotor tasks was positively correlated with positive mood, but Hesse and Spies (1996) showed that the induction of negative (sad) mood increased performance on a lexical priming task when compared with positive mood induction. Hesse and Spies proposed that this was due to the systematic, analytic and detail-oriented information-processing strategy that typically accompanies sadness. Thus, while positive mood enhances some cognitive tasks, negative mood may enhance others. For example, creative and inductive reasoning may be improved by happy moods (Isen, Daubman & Nowicki, 1987; Isen, Johnson, Mertz & Robinson, 1985). In the clinical domain, Raps, Reinhard and Seligman (1980) found that depressed patients showed deficits in cognitive task performance, but that these deficits were reversed by positive mood induction. Depressed mood decreased performance, while positive mood increased performance. The evidence from these studies points to mood congruency effects in which particular mood states facilitate performance on particular tasks. Therefore it is not only in the performance of ingratiation tasks that mood plays a facilitating role. For ingratiators, when expressed positive emotion is congruent with experienced emotion, their performance may well be improved.

While it may be desirable to present positive emotion to others in some social situations, Parrott (1993) noted that it is likely to be more difficult to present a mood to others that one does not feel, than to present a mood that one does feel. He pointed out further that it is more socially dangerous to present a mood that one does feel because one's true mood or feeling may "leak out" in ways that others can detect. Similarly, research reviewed by Fiske and Taylor (1991) showed that when a false impression is being conveyed, frequently the nonverbal communication channel will "leak", giving away the speaker's true feelings. Sometimes, such leakage does not go unnoticed by a target, and attempts to make a positive impression can be undermined. Ekman, Friesen and O'Sullivan (1988) found that an attempt to display one emotion while feeling another leads to signs of this internal struggle appearing on the face and the strategy is revealed.

As an explanation of emotion leakage, Greene, O'Hair, Cody and Yen (1985) suggested that emotional states are characterised by autonomic and motor responses produced at low levels of the output representation, and that these reactions proceed automatically. It is not necessary to construct a smile when one is happy or to remember to clench one's teeth when one is angry. As a result of the automaticity of these low-level components of emotional responses, there is a tendency toward leakage during deception. In their experiment in which some participants were instructed to lie about a particular aspect of their lives, Greene et al. (1985) showed that deceivers made significantly less body movements than truth-tellers, and exhibited more smiling than truth-tellers, and that these differences were perceived by raters who were blind to the truth-teller/deceiver conditions. DePaulo (1992) pointed to the connection between emotion and non-verbal behavior posited by such major theorists of emotion as Buck (1984), Ekman (1977), and Izard (1977). These researchers maintain that there are hard-wired links between the elicitation of certain basic emotions and the triggering of facial muscles that produce expressions of those emotions. These hard-wired links make the experience of an emotion almost sure to trigger the facial expression of the

emotion, unless there is concerted effort to control those facial muscles. It is for this reason that DePaulo (1992) asserted that the kind of information that is conveyed by non-verbal behavior is sometimes more intensely and inescapably personal than is the information conveyed by verbal behavior.

However, the very mechanisms that lead to emotional leakage allow people to successfully pose certain states nonverbally. Virtually every study of the deliberate presentation of an emotional state (for example, fear) has shown that people can successfully convey to others, using only nonverbal cues, the impression that they are experiencing a particular internal state when in fact they are not (DePaulo, 1992). By activating the hard-wired structures proposed by Buck (1984), people can tap into the spontaneous expressions of those emotions. If people are so successful at deceiving others about their internal states, how does the problem with emotion leakage come about? The answer seems to be in the degree of deception being attempted. As discussed earlier, ingratiation strategies tend to involve such features as selective disclosures and omissions, matters of emphasis and toning, and editing of self-images rather than out-and-out deception. Lippa (1976) reported that when people tried to assume an entire constellation of behaviors indicative of a wholly different personality type than their own, the deception was perceived by observers. It may be that, while people are trying to express an emotion that is fairly close to their experienced state, they are more credible than when they try to express an emotion that is very different from their experienced state. It follows, then, that ensuring that one's experienced emotion is close to the emotion one is trying to express is an effective way to be credible.

1.1.4 The perception of successful ingratiation

The monitoring of ingratiation strategies entails that people make inferences about the effects of their attempts at impression management. It may be that actors observe their own behavior and infer from that how others might be reacting (Bem, 1964). Actors may observe their own behavior, form a

judgement of that behavior and, by assuming that others think the same way that they do, infer the targets' reactions.

In the absence of any clear reason to think otherwise, people seem to believe that others see them quite similarly to how they see themselves (DePaulo, Kenny, Hoover, Webb & Oliver, 1987; Kenny & DePaulo, 1993). Kenny (1994) found that individuals assume that their personalities are immediately transparent to others. This assumption allows actors to assume that they appear to others the same way that they appear to themselves. While Kenny's work applied to judgements about personality, it can usefully be applied to inferences made about emotional states. He concluded that people directly observe their own behavior, and infer from it what other people think of them. He claimed that peoples' theories about themselves produce expectations of how others perceive them and therefore drive their meta-perceptions about how others see them. The possibility that people's theories about themselves are not accurate accounts for the inaccuracies in their beliefs about how others perceive them. Kenny cited, as evidence, the particularly strong relationships between the way people view themselves and the way they believe that others view them; his review of six studies produced a very strong positive relationship between the perceiver's self-perception and the perceiver's beliefs of others' perceptions of him or her. In a review of eight studies measuring generalised and dyadic accuracy (that is, how others in general view the actor, and how one other person views the actor), Kenny (1994) found that the overall level of generalised accuracy for personality traits was substantial, while the overall level of dyadic accuracy was much lower. Accuracy is concerned with the questions of whether people can predict how others describe themselves, and alternatively, whether people can predict how others describe them. Accuracy refers to the degree of matching between a prediction and an actual description. So it seems that, although people have a reasonably accurate impression of how others generally perceive them, they are not as accurate when it comes to judging how specific individuals perceive them.

Alternatively, people may see themselves as others see them (Shrauger & Schoeneman, 1979). According to this view, people watch their interaction partners, and perceive themselves in terms of the partner's reactions to them. Funder (1995) proposed a model of how people make judgements about others' personalities (interpersonal perception). While Funder's model was developed for the purposes of explaining personality judgements, it can usefully be applied to the current topic of judgements of emotion. Similarly, while the model was designed to explain perception (judgements of another's personality) it can be applied to metaperception (judgements of another's perceptions of the self). The terms used by Funder need to be made explicit here in order to prevent confusion with the terms commonly used in the ingratiation literature. Funder referred to a judge and a target (of the judgement). The ingratiation literature refers to a target as the person towards whom an ingratiation strategy is aimed. During an ingratiation task, both the ingratiator and the target of that ingratiation strategy fulfil the roles of what Funder calls "judge" and "target". Additionally, in a dyadic interaction, both participants can make judgements and meta-judgements, but the processes involved in both kinds of judgement remain the same. Funder's Realistic Accuracy Model (RAM) proposes that judgement accuracy (judgements of others' attributes or metaperceptions of others' perceptions of the self) depends on four factors, namely, the *availability, detection* and *utilisation* of *relevant* behavioral cues. Accurate, informative cues to emotion will result in accurate judgements. Availability involves the presence of cues to emotional states. Detection is the sensitivity of a judge to available cues and utilisation involves the way in which a judge will interpret the cues that have been perceived. Relevance is the congruence between behavioral cues and personality traits (or emotional states) in the target.

As might be evident, Funder's RAM incorporates some of the variables investigated in the present research. For example, relevance is the congruence of emotional experience and expression, and availability is the expressiveness (referred to above), both of which reside in the target. In the present research

this applies to the ingratiator while being judged by the target, and equally to the target of the ingratiation while the ingratiator is making meta-perceptions of how much the target likes them. Detection and utilisation comprise the intrapersonal factors of the judge (in the present research, this role is taken by the ingratiator while making meta-perceptions of how much the target of the ingratiation likes them, and by the target of the ingratiation when making judgements about the ingratiator). Relevance, availability, detection and utilisation may be involved in both tasks, perception and meta-perception, and are factors that apply to both the ingratiator and the target of the ingratiation at different times during the interaction.

Kenny's (1994) theory (by assuming that others perceive them the same way that they do, actors may develop beliefs about how others view them based on their self-theories and self-perceptions) can be integrated into Funder's RAM. If people do not look to the behaviors of others for cues about the others' perceptions of them, the factors of relevance and availability could still apply. If the emotional cues that ingratiators perceive in themselves are not relevant to what they are expressing, or are of very low intensity, the meta-perceptions they have of the target's liking of them will be different than when relevance and availability are higher.

The explanatory breadth of Funder's theory encompasses more of the specific phenomena under investigation in the present research, and therefore an integration of Kenny's and Funder's theories was employed for the present study.

1.1.5 Summary

The empirical evidence and theoretical claims presented thus far point to some plausible hypotheses that warrant further investigation. First, people who express positivity are more likable than those who do not. This is a function of both expressiveness and positivity, and may, or may not, be dependent on the experience of positive emotion. Second, the expression of positivity as an

ingratiation strategy is more effective when the target is convinced that this display is an authentic representation of the actor's emotional state. By noticing behavioral cues, the target makes inferences about the internal emotional state of the actor. If those cues are suggestive of an emotional state that is incongruent with the particular emotion displayed, the target may question the motives of the actor for the display of that emotion. Third, people may self-regulate their emotions in order to make their emotional expressions congruent with their emotional experience. As a consequence, any emotional cues noticed by the target are more likely to be congruent with the emotion being expressed and felt. Fourth, actors' meta-perceptions of how they are presenting themselves depends on the cues from the target of their self-presentational strategies, and on the perceptions of the actors' internal cognitive and affective cues as well as their behavior. Fifth, interpersonal perception and meta-perception both involve four factors, namely relevance, availability, detection, and utilisation.

1.2 Part two: The self-regulation of emotion in adolescence

The self-regulation of emotion is a domain of psychology that has received much attention in recent times, initially in the developmental literature (e.g., Campos, Campos & Barrett, 1989; Eisenberg & Fabes, 1992; Thompson, 1990, 1994), and more recently in the adult literature (e.g. Gross & Levenson, 1993; Izard, 1990). In the clinical literature, emotion dysregulation is highlighted as a major factor in the interpersonal difficulties experienced by those who have psychiatric problems. Therapies for psychological disorders that have a high impact on interpersonal functioning inevitably contain some element of emotion regulation strategy. For example, breathing retraining and relaxation for social phobia (Andreoli, Casolari & Rigatelli, 1995), and emotion regulation skills for borderline personality disorder (Linehan & Kehrer, 1993). In the forensic literature, the inability to self-regulate emotion is cited widely as a major causative factor in criminal offending, particularly when that

dysregulation is evident in social functioning (Ward, Keenan & Hudson, in press).

1.2.1 The development of the self-regulation of emotion

Although it is reasonable to suggest that people should self-regulate their emotional experiences in order to make them congruent with the emotions they want to express, the ability to do so depends on many factors. According to Thompson (1994), emotion regulation is defined as "...the extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (pp. 27-28). For example, as has been suggested, when trying to ingratiate oneself with another person it may be necessary to manage negative emotions, such as anxiety, in order to prevent the leakage of that emotion while one is attempting to portray positivity. Many researchers are actively involved in identifying the various factors (for example, age, maturational state, experience, culture, language and psychopathology) which impact on these questions: whether it is possible to self-regulate emotion, how the ability to do so develops across the lifespan and how effective this self-regulation is (Dodge & Garber, 1991). For example, Labouvie-Vief, Hakim-Larson, DeVoe and Schoeberlein (1989) found, in a study of emotional development (participants were aged 11 - 67 years), that there was a developmental trend in the understanding and control of emotional states as a function of age. As people got older, they understood their own and others' emotional states better, and they were able to control their own emotional states more effectively.

The self-regulation of emotion depends on biological maturity, genetic predisposition (particularly temperament), interactions between the individual and the environment, and cognitive development (Thompson, 1991). Each of these factors contributes to individuals' ability to self-regulate their emotional experience and expression. This ability must impact directly on the use of self-regulatory strategies in social situations, including the modulation of emotional experience and expression, which are called for by ingratiation tasks. Evidence

for the relevance of emotion regulation to social functioning comes from a number of quarters. Baumeister and Heatherton (1996), in presenting a cognitive model of self-regulation, suggested that self-regulatory failure is a major contributing factor in interpersonal problems. In the developmental literature, Rubin, Coplan, Fox and Calkins (1995) showed children with good emotion regulation to have fewer social problems than those with poor emotion regulation. The relevance of self-regulation to interpersonal relations is evidenced by the large numbers of studies concerned with emotion regulation and social relations in pre-school children that have shown how emotional skills, including self-regulation, play a critical role in prosocial behavior (Cassidy, Parke, Butkovsky & Braungart, 1992; Denham, McKinley, Couchard & Holt, 1990; Garner, Jones & Palmer, 1994; Walden & Field, 1990). Eisenberg, Fabes, Murphy, Maszk, Smith and Karbon (1995) and Eisenberg, Fabes, Karbon, Murphy, Wosinski, Polazzi, Carlo and Juhnke (1996) found that children who were both unregulated and high in emotional intensity were prone to social problems. Studies of children's empathic responding have shown that those who are good self-regulators show more empathy than those who are poor self-regulators do (Eisenberg, Fabes, Murphy et al., 1996). These authors have all concluded that emotionality and emotion regulation contribute to the development of social functioning. Similarly, Parke (1994) suggested that emotional skills have become recognised as a centrepiece for understanding children's emerging competence in their social relationships.

As stated above, Thompson (1991) pinpointed four factors contributing to the ability to self-regulate emotion. The first was biological maturity. Segalowitz & Rose-Krasnor (1992) have suggested that development of the frontal lobes of the brain plays an important part in cognitive and social development, in that the development of executive functions (for example, development of strategies; evaluation of strategies; monitoring, inhibition and initiation of behavior; monitoring of the effects of behavior on others) "...are recognised as critical for competent social behavior" (p.3). Without these executive abilities, the planning of social strategies (for example, ingratiation),

the regulation of emotional states, the monitoring of their progress and the evaluation of their outcomes are compromised. These observations come from studies conducted with people who have had diseases of, or traumatic brain damage to, the frontal lobes of the brain (Stuss & Gow, 1992a, 1992b). Stuss (1992) and Chelune and Thompson (1987) have found that development of the frontal lobes is largely complete by puberty, with some further development during adolescence. Further, Case (1992) maintained that between the ages of 11 and 16-18, an additional cycle of frontal lobe development may take place that would account for the psychological cycle of development that occurs during that time period.

The second factor was temperament. Temperament has been conceptualised as variations in behavioral style that are presumed to have a constitutional and/or hereditary basis (Thompson, 1991). Most theories of temperament underscore individual differences in emotional reactivity and regulatory features (e.g., Derryberry & Rothbart, 1988; Rothbart, Derryberry & Posner, 1994). Kagan's well known work on behavioral inhibition (Kagan, Reznick & Snidman, 1987) suggests that humans are genetically endowed with individual differences in the threshold of response in those parts of the central nervous system that contribute to states of psychological uncertainty and physiological arousal. Kagan et al. (1987) showed that those children identified as being behaviorally inhibited behaved in a shy, cautious manner, whereas those who were identified as being uninhibited behaved in a fearless and outgoing way. A popular experimental methodology for investigating this phenomenon is to confront a child with a stranger (either a peer or an adult) and monitor behavioral and physiological responses to this encounter. The unfamiliarity of this encounter produces differential physiological and behavioral responses among children. Connell and Thompson (1986) also suggested that emotionality demonstrated in a Strange Situation experiment has significant consequences for subsequent social interactions. Similarly, Eisenberg, Fabes, Minore, Mathy, Hanish and Brown (1994) referred to a number of studies that have shown that children's temperament, particularly

their emotionality, is associated with socially competent behavior. Emotional arousability, negative affect and temperamental intensity have been associated with angry outbursts, aggression, acting out behaviors and low popularity.

However, it would be a mistake to assume that temperament is unmalleable, or that the environment cannot influence the behavioral manifestations of a particular temperamental style. For example, Reznick, Kagan, Snidman, Gersten, Baak and Rosenberg (1986) found that some children who were classified as behaviorally inhibited at twenty-one months were re-classified as uninhibited at five and a half years, showing that they had learned to control their fear responses. This is not to imply that they still felt as fearful as they had when they were twenty-one months old and were simply suppressing that fear. Emotion regulation involves cognitive aspects such as, in this case, the knowledge that one is unlikely to come to harm when in the Strange Situation. The development of emotion regulation skills, likely learned in the context of sensitive and responsive parenting (Kopp, 1989), allowed social interaction with strangers in five and a half year old children who had been incapable of such interaction at twenty-one months. Thus, while temperamental tendencies towards inhibition or disinhibition may be moderated by environmental contingencies and cognitive development, they impact on social functioning from the beginning of social life, and make emotion regulation a critical part of that functioning.

The third factor, the capacity to self-regulate their emotions, is importantly a function of children's interactions with others. Through contact with multiple sources of socialisation (family, teachers, peers) children learn which emotions they may safely feel and/or express (Campos & Stenberg, 1981: Harris, 1989; Malatesta-Magai, 1991; Miller & Sperry, 1987). If children see others successfully managing their emotional expressions, they learn that emotion regulation is possible (Campos, Barrett, Lamb, Goldsmith & Stenberg, 1983; Walden, 1991). With the development of musculoskeletal control, and with the advent of language, children become more adept at emotion regulation.

Increasingly complex language skills allow children to communicate with others about their own and others' emotional states and thereby obtain direct instruction about emotion regulation. They are able to approach, withdraw from, or alter emotionally salient features of the environment, and gain increasing autonomy in emotion self-regulation (Gross & Munoz, 1995).

During social interaction experiences, children also learn to differentially express positive and negative emotions (Malatesta & Izard, 1984; Saarni & von Salisch, 1993) and learn *display rules* that govern the expression of emotions in specific situations (Ekman, 1972; Malatesta, Culver, Tesman & Shepard, 1989; Saarni, 1990). Display rules are the set of beliefs about what expressions of emotions are socially desirable or appropriate (Saarni & von Salisch, 1993). Adults have a sense of the social display rules governing which emotions ought to be displayed or not displayed in given situations. For example, they know that it is inappropriate to be jocular at a funeral wake, but appropriate to be jocular at a birthday party. Over time, children are increasingly exposed to, and pick up on, the display rules of their culture (Saarni & von Salisch, 1993). Ekman and Friesen (1975) introduced four prototypical strategies for characterising how people in Western cultures might modify their emotional behavior when they attempt to put display rules into practice. These strategies are minimisation, maximisation, masking and substitution. The first three strategies are involved in the subtle changes that people make to their presentational selves. As postulated by Jones and Pittman (1982), selective disclosures and omissions, and matters of emphasis and toning are the typical features of ingratiation behaviors, and minimisation, maximisation, and masking will be the emotion regulation strategies employed during ingratiation.

The fourth factor, the development of cognitive skills, impacts on the development of emotion regulation skills. Since current literatures show that cognition and emotion are powerfully interrelated (Case, 1985; Dodge, 1991; Izard, 1992, 1993; Parrott & Schulkin, 1993), it follows that the development of

emotion and cognition are similarly intertwined. For example, Wintre & Vallance (1994) reported on a study that demonstrated the development of children's differentiation and integration of emotional experience and cognition in a stage-like fashion. Similarly, Kopp (1989) maintained that planful emotion regulation emerges slowly because it is intrinsically tied to a developmental relationship with cognition and is thus constrained, to some extent, by the timetable of cognitive development. Consequently, certain cognitive processing skills, for example the executive functions, have to become functionally mature within the behavioral/emotional repertoire before they can be mobilised for emotion regulation.

By middle childhood children are already aware that emotional expression can be dissociated from internal emotional experience (Harris & Gross, 1989; Saarni, 1984; Taylor & Harris, 1984). The ability to do this requires the ability to distinguish between the appearance of an emotion and the reality of an emotion; that is, to understand that emotions are in part internal, mental states, and not just external appearances (Banerjee, 1997). An awareness of these more mentalistic and goal-related aspects of emotion play a central role in mature emotional functioning (Campos, Mumme, Kermoian & Campos, 1994). In learning to operate adaptively in their social worlds, children must also learn to contextualise this more abstract knowledge about the distinction between internal feelings and external appearances when using display rules for emotional expression that are relevant to their culture. Adults are aware that inner feelings and outer expressions can be distinct, recognising that people can, and often do, hide their internal emotions by altering their external expressions (Zammuner & Frijda, 1994), or that others' expressions may be a mask for their true feelings (Hochschild, 1983). These expressive strategies have also been observed in preschool children (Saarni, 1990; Banerjee, 1997). Saarni and von Salisch (1993), and Harris (1989) found that children younger than six could, when asked to, readily adopt pretend facial expressions, but they could not articulate the embedded relationships involved in deliberate emotional dissemblance. By the age of six, however, children readily grasp that emotional

dissemblance has as its basic function the creation of a false impression on others. The ability to express an emotion that is at odds with experienced emotion has been demonstrated to be a function of increasing age by Feldman, Jenkins and Popoola (1979). In their drink-tasting experiment, participants sampled sweetened and unsweetened drinks while trying to convince another person that they liked both drinks. As participants' age increased from 6 years to 20 years, the ability to convince others improved systematically. Clearly, cognitive developmental changes have a dramatic impact on the development of emotion and self-regulation.

The repertoire of strategies for emotional self-regulation expands significantly in size and complexity during middle childhood (Thompson, 1991). During this period, for example, children come to understand that emotional experience can be altered by internal emotional re-direction (thinking happy thoughts in a sad situation), or by acting in a way that provokes a different emotion (for example, playing with toys when feeling anxious) (Altshuler & Ruble, 1989; Band & Weicz, 1988; Carroll & Steward, 1984; Harris, Olthof, Terwogt, 1981). Saarni (1988) reported that these more sophisticated understandings develop in the context of social interactions, and may be scaffolded by adults and older children.

From the literature reviewed above, it may be concluded that, by early adolescence, children have the emotion regulation skills necessary for the deliberate expression of emotion that may not be congruent with their emotional experience at the time. They have the biological maturity, the social experience and the cognitive skills necessary to know what emotional expressions are appropriate for specific social tasks, and to strategically regulate their emotional experiences and expressions.

1.2.2 The self-regulation of emotion and social functioning in adolescence

The literature on the further development of emotional self-regulation during adolescence is sparse, the assumption being that this developmental period is the beginning of the adult years (Thompson, 1991) and therefore the

literature on adolescent emotional development tends to be subsumed under the adult literature. For example, Greene (1990) found, in a factor analytic investigation of adolescent emotion (ages 9 -15), that there were two internally consistent factors that were virtually identical to the positive and negative emotion dimensions described in the literature on adult emotion. However, this author also found that variation along these dimensions was related to the social transitions that are part of adolescence (for example, the transition from same-sex relationships to heterosexual relationships). Further evidence for major developmental challenges during adolescence comes from Petersen and Hamburg (1986) and Nottelman (1987), who found that entry into secondary school represented significant change from elementary school, and posed major socioemotional challenges for adolescents, challenges that would certainly differentiate adolescent emotional development from adults to some extent.

While adolescent emotion appears to be consistent with adult emotion, there may be some unique and specific developmental issues that influence emotional experience and the ability to self-regulate emotion during adolescence. In particular, the regulation of emotion for the purpose of achieving social goals is of vital importance during adolescence. Researchers are becoming increasingly aware that poor relationships in adolescence are predictive of social incompetence and maladjustment in adulthood (Cassidy & Lynn, 1991; Cole, Chan & Lytton, 1989; Feehan, McGee,Williams, & Nada-Raja, 1995; Rotheram-Borus, 1989; Schonert & Kimberly, 1993). Therefore, increasing attention is being paid to the complexity of what is involved in poor relationships in adolescence, and to the role of self-regulation of emotion as a critical factor in successful relationships (Buchsbaum, Toth, Clyman, & Cicchetti, 1992; Kobak & Ferenz-Gillies, 1995; Kobak, Ferenz-Gillies, Everhart & Seabrook, 1994).

While biological, temperamental and social development are relatively advanced by early adolescence, a number of developmental factors arise during the adolescent years that contribute to emotion regulation and social competence. Four of these factors will be addressed here, in an attempt to

identify some that might differentiate early adolescence from late adolescence, namely, identity development, perspective-taking and egocentrism, coping strategies and cognitive development.

Erikson (1983) has described the task of *identity formation* as a critical factor in the development of intimate relationships. Identity formation is the process whereby adolescents begin to explore the possible identities available to them in an attempt to individuate from their parents and prepare for an independent life. Moore and Boldero (1991) found that adolescents (aged 12 - 20 years) who scored highly on a measure of identity formation were more satisfied with their relationships than those who scored lower on the measure. In addition, the high-scorers' relationships appeared affectively richer. Similarly, Kacerguis and Adams (1980) found that, among college students, more advanced stages of identity development were associated with higher levels of intimacy formation. Identity development is also related to decreased self-consciousness, in that those who have achieved an identity are more willing to reveal the self to others (Adams, Abraham & Markstrom, 1987). Additionally, identity development is related to increased self-confidence (Helbing, 1984).

Colvin (1993) found, in a longitudinal study of participants from the age of 3 to 23, that the judgability of adolescents was positively related to ego resilience (the psychological adjustment that is associated with identity formation). Judgability is characterised by the ease with which coherent patterns of personality and behavior in others are detected, and judgable people are characterised as open, knowable and coherent, whereas less judgable individuals might be perceived as closed, enigmatic, rigid or erratic. Psychological adjustment includes such facets of personality as correspondence between the private and public self, behavioral predictability, self-knowledge and social skill (Colvin, 1993). Colvin's findings further stress the link between the development of identity and emotional expression (via judgability). This evidence suggests that the development of a personal identity (a task usually begun in adolescence) impacts strongly on interpersonal functioning. As

identity develops, so does the ability to self-regulate emotion in social situations.

The development of interpersonal understanding during adolescence includes two topics that have been of particular interest to researchers. These are *perspective-taking* (Barenboim, 1981: Selman, 1980), and *adolescent egocentrism* (Elkind, 1967; Lapsley, Milstead, Quintana, Flannery, & Buss, 1986). Selman (1980) has proposed a model of perspective-taking that emerges during adolescence rather than the changes typically described in childhood. Selman's levels begin with simple egocentric judgements (the self's own viewpoint is the same as the other's viewpoint); then there is a move to a self-reflective phase in which the individual recognises the self as a possible target of others' perspectives; following this, there emerges a mutual, or third-person, perspective, which is characterised by the ability to engage in recursive perspective-taking ("You know that I know that you know..."); and lastly, a level is reached which involves the understanding of a network of perspectives which binds individuals into a social system.

Elkind's (1967) notion of egocentrism identifies the emerging recognition that one may be the focus of another's attention. In early adolescence, this leads to an overgeneralisation of this new understanding, and a self-consciousness that assumes that one's behaviors are the focus of others' thoughts. Egocentrism involves two concepts, "imaginary audience" and "personal fable". Imaginary audience refers to the tendency for adolescents to believe that they are the centre of attention, and that others are constantly watching them. Personal fable refers to the elaborate fantasies that adolescents construct in order to explain why everyone should be watching them. Together, imaginary audience and personal fable result in the fantasies which place adolescents at the desired, and dreaded, centre of attention. Jahnke and Blanchard-Fields (1993) found, as did Lapsley and Murphy (1985), that egocentrism is the outcome of social cognitive development, and that personal fable and imaginary audience are not negative, but adaptive, and aid in the process of resolving the conflict between being

dependant on one's parents and the need for autonomy. These authors proposed that self-reflection and reciprocal perspective-taking are facilitated by adolescent egocentrism.

There is evidence to suggest that this egocentrism decreases as adolescence progresses (e.g., Anolik, 1981; Elkind & Bowen, 1979; Enright, Lapsley & Shukla, 1979; Goossens, Seiffge-Krenke & Marcoen, 1992; Simmons, Rosenberg & Rosenberg, 1973), and beliefs about others' perspectives of one become more realistic (e.g. Protinsky & Wilkerson, 1986). However, it has also been suggested that the phenomenon of the "imaginary audience" reappears whenever significant social transitions occur, such as the transition from elementary school to high school or the transition from high school to college (e.g. Peterson & Roscoe, 1991). Enright and Deist (1979) emphasised the importance of the ability to see themselves as others see them as a critical factor in adolescents' identity formation. The ability to take others' perspectives and self-reflect both require emotional regulatory skills, since it is necessary to control one's own emotional experiences while attempting to take another's perspective. Equally, it is necessary to control one's emotional experiences when one is attempting to reflect on one's thoughts, feelings and behaviors since the interruption of cognitive activity by emotion is well established (e.g., Nielson & Sarason, 1981).

Altshuler and Ruble (1989) suggested that with increasing age children have more access to their own thoughts and strategies, which may help them to expand their repertoire of situationally relevant *coping strategies*. For example, Brotman Brand (1990) showed developmental trends in the way youngsters cope with diabetes. The younger children (mean age 8.8 years) employed primary coping strategies (trying to modify aspects of the situation), directing their coping at concrete, modifiable aspects of diabetes control, for example, getting an injection. In contrast, the older group (mean age 14.6 years) reported significantly more secondary control (trying to come to terms with unalterable circumstances), for example, changing their thoughts and emotional reactions to diabetes. Similarly, Compas, Banez, Malcarne and Worsham (1991)

supported the belief that emotion-focused coping emerges during early adolescence, well after problem-focused coping skills. These authors suggested that (a) younger children may have less access to, or awareness of, their own internal emotional states, (b) younger children may fail to recognise that emotions can be brought under self-regulation, and (c) the emotion-focused coping efforts of others are less observable than problem-focused coping strategies, and therefore less easily learned through modelling processes. This evidence suggests that, as adolescence progresses, children have more coping strategies at their disposal, including learning to modify their emotions. An increasing awareness that emotions can be self-regulated, and practice at doing so over the adolescent years should make older adolescents more skilled at emotion regulation than younger adolescents.

Deeply embedded in adolescents' views of the self, of relationships to others, of society and of the world is their *cognitive development* . Basic psychodynamic and family issues of separation and individuation are evidenced during adolescence as well as the adolescent's increasing breadth of vision and decreasing sense of certainty. New and powerful emotions challenge the adolescent's emerging cognitive skills and rationality, but it is those same developing cognitive skills on which the adolescent must rely to make sense of unexpectedly complex feelings (Keating, 1990). In a series of experiments, Chandler, Boyes and Ball (1990) showed how relativistic thinking (coming to acknowledge that beliefs are not simply true or false, and that objective evidence may not exist as justification for all beliefs) develops through the ages of 12 years to 16 years. In their study, this sophisticated approach to knowledge and problems was associated with formal operational thinking ability, but not concrete operational thinking ability, and was also associated with a more mature identity status. Thus, the ability to regulate the unexpectedly complex emotions associated with adolescence may be dependent on the development of sophisticated cognitive skills.

Nissim-Sabat (1978) found, in a study of 16-18 year olds, that there was a relationship between Piagetian cognitive stages and social orientation. Those children who were capable of formal operational thinking had more sophisticated social cognitive skills than those who were not capable of such thinking. Case (1985) proposed four substages of cognitive development during adolescence that replace the single Piagetian move from concrete operational thinking to formal operational thinking. Case detailed increasing levels of cognitive development throughout adolescence, levels that lead to more sophisticated strategies and levels of understanding. For Case, a thread running through this developmental period is the emergence of perspective taking, a decrease in egocentrism and the increasing use of hypothetical thought. As adolescence progresses, thinking tends to: involve abstract rather than merely concrete representation; become more multidimensional rather than limited to a single issue; become more relative rather than absolute in the conception of knowledge; become more self-reflective and self-aware (Keating, 1990). In her evaluation of available research, Neimark (1982) concluded that, regardless of investigators' theoretical orientation and method of assessment, there was a clear change in the quality and power of thought during the 11-15 year age range.

In general, there is an increase in cognitive differentiation during adolescence. This cognitive differentiation involves the increasing ability to hold several complex mental representations simultaneously, and may be closely related to other key psychological developments, particularly in the self-system and in relationships with significant others, both family and peers. That is, a broader process of separation and individuation, which requires a more advanced level of objectifying the self in relation to others, may be intimately connected to the more traditional cognitive changes noted above. This cognitive differentiation also results in more flexible thinking, and the ability to adapt to changing environments, choosing among a variety of possible responses rather than employing a single, generic strategy for all situations. If so, this would imply close connections between cognitive, social and emotional developments

(Keating, 1990). This author notes that such mutual influences need to be explored further.

The evidence presented in the four areas above suggests that there are developmental changes during adolescence that impact on social functioning and emotion regulation. It seems that, as adolescence progresses, and with an increase in cognitive flexibility, children develop a sense of identity that impacts on how they interact with others. They also become more able to self-reflect and see others' perspectives, and increase their range of emotional coping strategies. All of these developmental tasks are intimately linked to the self-regulation of emotion.

1.2.3 Summary

As was the case for the studies of ingratiation, the theoretical and empirical claims in the developmental studies presented thus far also point to some plausible hypotheses. First, the development of the ability to self-regulate emotion in the service of social goals begins in infancy, and develops in complexity and effectiveness as a function of biological maturation, cognitive development, environmental challenges and socialisation, and learning processes. It has been observed that, by the end of middle childhood (9 years), children understand the interpersonal consequences of emotional display (Banerjee, 1997; Garner, 1996; Harris, 1989), for example, that one can influence others by the display of emotion. By elementary school years (10 - 11 years), children experience many social encounters in which they feel it is necessary to manage their feelings and expressive behavior (Saarni & von Salisch, 1993). In their interactions with others, there are times when they need to inhibit their emotional expression or enhance such expression. Using self-regulation strategies helps to regulate negative emotion, regulate the emotions of others, and present the self in a desired emotional way. Upon entering adolescence, children have developed the ability to distinguish real from apparent emotions (Harris, Donnelly, Guz & Pitt-Watson, 1986), to be aware of the situational (e.g. I'm happy when it's my birthday") and mental (e.g. "I mostly don't let other

kids know when I'm sad") aspects of various emotions (Harris, Olthof & Terwogt, 1981), and to experience two contrasting emotions simultaneously (Harter & Buddin, 1987). It is generally accepted that the transition from childhood to adolescence presents particular socioemotional challenges that require more sophisticated self-regulation skills in order to function effectively in social situations (Nottelman, 1987). With the transition from concrete to abstract thinking comes a greater focus on internal emotional states (Harris et al, 1981), which in turn contributes to a change in the personal meaning of emotions and improved emotion regulation.

Second, emotion regulation is closely linked to social competence and the development of interpersonal relationships. The ability to self-regulate emotion impacts strongly on how people fare in their social interactions.

Third, while children have a number of social and self-regulatory skills by the time they reach adolescence, there are specific developmental variables that impact further on social and self-regulatory skills during adolescence. Identity development, increasing coping strategies, the decline in egocentrism, and increasing abstract reasoning ability all impact on social and self-regulatory skills.

1.3 Part three: The Present Research

The research reviewed in this introduction has found that when people express positive emotion, they are judged as being more likable than when they do not express positive emotion (Clark et al., 1996; Godfrey, Jones & Lord, 1986; Schneider, Hastorf & Ellsworthy, 1979). The literature also suggests that it may be easier to express positive emotion when one is feeling positive than when one is not feeling positive (Parrott, 1993; Wegner & Erber, 1993). The deception literature suggests that, while it is possible to act in a way that is incongruent with one's internal emotional state, the internal emotional state may leak through body and vocal cues that can be perceived by observers (Fiske & Taylor, 1991). Therefore, if one has a social goal of being liked, and has planned

to express positive emotion, the elicitation of a congruent emotional state may help to facilitate that expression. This literature leaves some questions unanswered. For example, the relationship between experienced and expressed emotion in ingratiation tasks has not been attended to. In addition, there is little research directed specifically at the self-regulation of emotion for ingratiation purposes. For example, DePaulo (1992) proposed that the role of non-verbal expressiveness as a link between emotion and the impressions that are conveyed in social interactions is in need of empirical exploration. Similarly, Baumeister (1982) called for more research to establish whether an emotion can arise because it is called for by self-presentational motivations. Parkinson (1997) suggested that examining peoples' beliefs and practices in everyday social life may help in beginning to clarify the interpersonal goals motivating emotions and the ways in which these goals are interpreted and negotiated during real-time encounters.

The research reviewed in this introduction has also found that the development of emotion regulation in social situations during adolescence has received little attention, and so, in line with the research on adolescent development reviewed above, adolescents (aged 11-18) were chosen as the participants for this study. The relationship between age and the ability to express positivity in an ingratiation task, and relatedly, the relationship between age and likability was investigated. In addition, since the self-reflective and perspective-taking skills of younger adolescents might not be as well developed as those of older adolescents', the possibility that younger adolescents would not be as accurate in predicting the stranger's liking ratings of them as the older adolescents was explored.

The present work investigated how positive mood and the expression of positive emotion affect the outcome of ingratiation strategies, the relationships between the experience and expression of emotion and whether emotion regulation is employed during such strategies. Participants interacted with a stranger and were given the instruction that they were to get the stranger to like

them. By inducing positive mood in half of the participants and neutral mood in the other half, it was predicted that those who were in a positive mood would be more effective in achieving that goal than those in a neutral mood, because those in a positive mood would express more positivity than those in a neutral mood. The distinction between experienced positive emotion and the expression of positive emotion was investigated by getting participants and the stranger to rate the participants' expression of positive emotion cues, and relating those ratings to the participants' ratings of their positive emotional experience. The two self-ratings of positive emotional experience were mood ratings and thought listing protocols. It was predicted that there would be a positive relationship between participants' experience of positive emotion and their expression of positive emotion.

Since people know that being positive makes one likable, those in the neutral mood condition might self-induce positive mood in order to achieve their goal. Baumeister (1982) suggested (referring to work by Baumeister & Cooper, 1981; and Lanzetta, Cartwright-Smith & Kleck, 1976) that, when a person has a motive to express a particular emotion, his or her internal state will co-operate and furnish the desired level of emotion. So, it may be possible to make oneself feel happy when wanting to appear happy. By investigating participants in the neutral mood condition, it was hoped that some insight might be gained into the possible self-regulation of their emotional states in order to be positive during the interaction with the stranger.

1.3.1 Methodological issues

In an attempt to identify cues to positive emotions in the participants, a checklist of positive emotion cues was derived. Fridlund's (1994) research indicated that using many cues to observe emotions has advantages, since single cues may have unclear interpretations and manifold causes. People scream, for example, because they're angry or because the stereo is too loud and they can't be heard. Fridlund suggested that multiple cues may be especially helpful in detecting emotions in others by triangulating the data and coming to

a more solid, trustworthy interpretation. It was therefore decided to use a range of cues in rating the emotional positivity of participants. It has been noted by many researchers that facial, speech and body cues are used in the detection of emotion, for example, eye contact, smiling, and rate and amount of speech (Fiske & Taylor, 1991; Foot, Chapman & Smith, 1977; Garcia, Stinson, Ickes, Bissonnette & Briggs, 1991; Godfrey et al., 1986; Planalp et al., 1996; Thimm & Kruse, 1993). More abstract descriptors of interpersonal style, for example, "friendly", "assertive", "positive", "smooth, natural and relaxed", "interested" and "enthusiastic" have also been used to define emotion in others (Garcia et al., 1991; Planalp et al., 1996; Watson, Clark & Tellegen, 1988; Youngren & Lewinsohn, 1980).

Consistent with the findings of this literature, nine items that reflect the cues associated with positive emotion (smiling, amount of speech, eye contact, friendly, natural, warm, encouraging, happy, positive) were included in the present research. In order to identify the likability of participants, a single measure of "liking" was included, (after Garcia et al., 1991, and Grush & Yehl, 1979). The ten items (nine items reflecting the cues associated with positive emotion, and one item reflecting liking) were included in a single checklist, entitled the Making Friends Rating Scale.

To be able to identify any strategies adolescents might use to deliberately manipulate their internal emotional states in order to make their experienced emotion congruent with their expressed emotion, thoughts and feelings were elicited from participants while they were planning how they would go about getting the stranger to like them. Similarly, to elicit positive and negative thoughts and feelings about the interaction, participants were asked to list these immediately after the social interaction.

In order to determine whether participants thought that they had achieved their goal of being liked, and to get an idea of how they rated their own expressions of positive emotion, participants completed the Making Friends

Rating Scale immediately after the interaction, assessing how they had appeared to the stranger. Since people do not see their own facial expressions exactly as others do, they are deprived of an important source of online information about the kinds of impressions they may be conveying (DePaulo, 1992). Therefore, the stranger also rated the participants on their emotional expressiveness. An independent observer who watched a videotape of the interaction completed the same checklist. The independent observer was included in order to counter the self-serving bias of the stranger's ratings. As discussed earlier, the *autistic conspiracy* is a phenomenon caused by the desire of ingratiators to conceal their ingratiation strategies, and the desire of targets to believe that the ingratiators are sincere in their positivity. By including the ratings of an observer who had no direct investment in the interaction, it was hoped to illuminate any self-serving biases of the stranger. The use of three raters for the measurement of emotional expression gave three different perspectives on that variable, and thereby the triangulation that makes measurement more accurate.

Eisenberg, Fabes, Minore, et al. (1994) suggested that the use of hypothetical dilemmas enables researchers to elicit responses from all children to the same social situations (that is, allows for control of the stimuli to which children respond) and is economical for the time and resources needed to collect data. However, these authors refer to Mize and Ladd's (1988) argument that this methodology may tap higher level reasoning than is actually used in real life situations and may tap the child's ability to construct or consciously select a normatively valued strategy. Further, they suggest that enacted procedures may also elicit more emotion than do verbal procedures, with the consequence that children's responses are more realistic. Similarly, Garner (1996) proposed that children's social-cognitive skills are best assessed in a naturalistic versus a hypothetical situation. The evidence for cognitive developmental shifts during adolescence tends to come from controlled experimental situations which may tend to overestimate the sophistication of adolescents' thinking in everyday life, which often tends to pose time-limited, dynamic and personally stressful cognitive challenges (Keating & Clark, 1980). Therefore it was decided to use an

enacted task in which participants were faced with a stranger and were instructed to try and get her to like them without divulging their goal to her. While there was an element of the hypothetical in the initial planning task, the interaction was real, time-limited and dynamic.

Garner (1996) suggested that future researchers investigating the importance of emotion skills for school-age children's social competence should consider matching the sex of the experimenter with the sex of the child. The author referred to Eisenberg and Lennon (1983) in which it was suggested that children's understanding of experimental material may be affected by the sex of the experimenter. Similarly, Wagner et al. (1993) suggested that the sex of the experimenter may influence the expression of emotion. Since the participants in the present study were to be recruited from a single sex, girls' secondary school, it was decided to use only females in the present study. The participants, experimenter, confederate and independent raters were all female.

1.3.2 The research hypotheses

Since this research attempted to answer some questions raised by a review of the relevant literatures, aims of this study were more inductive and exploratory than deductive and confirmatory. The plausible hypotheses presented from both the ingratiation literature and the developmental literature on emotion regulation were combined to construct the following research hypotheses:

1. **There will be a positive relationship between the participants' experience of positive emotion and their expression of positive emotion.**

This exploratory hypothesis was developed in order to investigate this relationship, since the existing research does not make the nature of the relationship clear in an ingratiation task.

2. **Adolescents who express more positive emotion will be more liked by the confederate and the observer.**

This prediction was developed to replicate, with reference to adolescents, the findings of other researchers who have proposed the existence of this relationship in adults.

3. **Those participants in the neutral mood condition will self-regulate their emotions, making them positive during their interaction with the stranger.**

This exploratory hypothesis was developed from the arguments linking the expression of positive emotion, liking and the self-regulation of emotion.

4. **There will be a positive relationship between participants' age and their expression of positive emotion.**

This exploratory hypothesis was developed from the arguments linking adolescent development and expression of positive emotion.

5. **There will be a positive relationship between participants' age and the liking ratings of the confederate and the observer.**

This exploratory hypothesis was developed from the arguments linking adolescent development, expression of positive emotion and liking .

6. **There will be less consensus between the ratings of younger adolescents and the confederate and the observer, than between older adolescents and the confederate and observer.**

This exploratory hypothesis was developed from the arguments linking adolescent development and person-perception.

2. METHOD

2.1 Participants

Eighty-two students were recruited from a local, single-sex, independent, secondary, girls' school. Information sheets and requests for participation were distributed to every girl in the school (n=680) to take home. These sheets included consent or refusal for participation from parent/guardian and student (See Appendix A for form). There were 138 returns with 56 refusals and 82 consents. Nine participants completed the procedure for the *pilot study* and 59 participants completed the procedure for the *main study.*

The first 10 participants to return their consent forms were assigned to the *pilot study.* The mean age of participants in the pilot study was 13 years 2 months (SD = 2 years 10 months). The minimum age was 11 years 4 months and the maximum age was 17 years 8 months. Participants were randomly assigned to either the Mood Induction: Neutral (NMI) condition or the Mood Induction: Positive (PMI) condition. Nine participants completed this procedure (1 failed to arrive for her appointment) - 5 in the Neutral condition and 4 in the Positive condition.

The remaining 72 participants were assigned to the *main study.* A total of 59 participants completed the procedure for the main study (13 participants failed to arrive for their appointments) - 30 in the NMI condition and 29 in the PMI condition. The mean age of the participants in the main study was 14 years 1 month (SD = 1 year 11 months). The minimum age was 11years 5 months and the maximum age was 17 years 9 months. There was no significant difference in the age of participants in the NMI and the PMI conditions. Participants were assigned to one of 4 age categories: 11-12 (n=17), 13 -14 (n=16), 15 -16 (n=15), 17-18 (n=11). Half of the participants in each age category were randomly assigned (by card sorting) to each mood induction condition and randomly assigned appointment times.

A 2 (Mood Induction: Neutral/Positive) X 4 (Age Category: 11-12/13-14/15-16/17-18) between-subjects design was used.

The female confederate was recruited from the Psychology Ph.D. programme at the University of Canterbury and was paid for her participation in the study. The confederate was blind to the purpose of the study and to the mood induction condition of each participant throughout the experiment. She was informed that she would be spending 5 minutes with each participant in a "getting-to-know-you" session, and that this would be videotaped. She was also informed that she would be asked to complete a checklist about each participant immediately after the interaction.

2.2 Materials

2.2.1 Mood thermometer

The mood thermometer was a visual reproduction of a standard temperature thermometer, placed vertically on an A4 page, 265mm long, and with markings 1 mm apart. There were 3 anchors - "very negative" at the bottom of the thermometer, "very positive" at the top of the thermometer and "neutral" at the half-way mark (See Appendix B). The participant was given the following instructions, "I want you to think about how you are feeling right now. This mood thermometer measures mood from 'very negative' (the worst you ever felt in your life) to 'very positive' (the best you ever felt in your life) with 'neutral' (neither good nor bad) in the middle. Please make a line across the thermometer that shows how you are feeling right now". Each mood rating was done on a separate page. One mm was equivalent to a score of 1. Possible scores ranged from 0 (most negative) to 265 (most positive) with 133 being neutral.

2.2.2 Thought listing protocols

Participants were asked to list their thoughts at 2 stages during the experiment: 1) While they were planning what they would say and do in order to get the confederate to like them, and what feelings they thought would be instrumental in achieving this goal; and 2) While they were retrospectively reflecting on the interaction. These protocols were adapted from Garcia et al., (1991), Osterhouse & Brock (1970), and Petty, Wells & Brock (1976).

Planning Thought Listing Task

An A4 sheet was prepared with 8 boxes and the following instructions at the top, "I am interested in the plans you are making in order to get the stranger to like you. I want you to think about what you will say and do, and what feelings inside you will help to make her like you, for example, being sad, angry, happy or excited. Simply list the plans as they occur to you, the first one in the first box, the second in the second box and so on. Please put only one plan in each box. Don't worry about grammar or spelling, just write down your plans. You will be given 2 minutes to complete this task. Don't worry about filling all the boxes - I've given you more than I think you will need. Please be honest (there are no right or wrong plans)." (See Appendix C)

Interaction Thought Listing Task

An A4 sheet was prepared with 8 boxes and the following instructions at the top, "I now want to know what you were thinking and feeling during your time with Meg. Simply list the thoughts and feelings as you remember them, the first one in the first box, the second in the second box and so on. Please put only one thought or feeling in each box. Don't worry about grammar or spelling, just write down your thoughts and feelings. You will be given 2 minutes to complete this task. Don't worry about filling all the boxes - I've given you more than I think you will need. Please be honest (there are no right or wrong thoughts and feelings)". (See Appendix D)

2.2.3 The Making Friends Rating Scale

The Making Friends Rating Scale was devised with 10 items. The first item measured overall liking and the following 9 items measured cues to positive emotion

Item 1: The participant was rated on an overall measure of liking, phrased as, "How much did you like the participant?"

Items 2-10: The participant was rated on 9 items measuring cues to positive emotional expression associated with liking (friendly, natural, warm, encouraging, happy, positive, smiling, talking, eye contact). These cues were presented in the phrasing "How friendly (natural, warm, encouraging, happy, positive) do you think she appeared?" and "How much do you think she smiled?", "How much do you think she talked?" and "How much eye contact do you think she made?"

All ratings were made on a 7-point Likert scale (1 = "not at all" and 7 = "very much"). There were 2 forms of the checklist - 1 for the participant, and 1 for the confederate, experimenter and independent coder. Each form was directed at the participant's performance, for example, the checklist for the participant asked the question "How much do you think the stranger liked you?" while the checklist for the confederate, experimenter and the independent coder asked, "How much did you like the participant?" (See Appendix E).

The experimenter (an adult female) and an independent coder (another adult female who was blind to the purpose of the study and to the mood induction condition of each participant) independently completed the same checklist after watching the videotaped interaction. The inter-rater reliability of the raters was tested in the *pilot study.* The experimenter and an independent coder separately completed the Making Friends Rating Scale for each participant after watching the videotaped interaction. The scores of the 2 raters for the first item, "How much did you like the participant?" correlated highly ($r = .80$, $p<.01$). A total score of the other 9 items was computed for each

participant. The totals of the 2 raters for the other 9 items also correlated highly ($r = .82$, $p<.01$). After these analyses were completed, interpretation of the 9 items was discussed and standardised in order to further increase reliability. For example, it was decided to interpret "natural" as "not trying too hard", "happy" was interpreted as "lack of anxiety", "warm" was interpreted as "self disclosure" and "asking personal questions", "positive" was interpreted as "self confidence". It was decided that, for the main study, ratings would be made individually and then compared. Differences in item scores would be resolved through discussion (after re-viewing the videotapes) as far as possible.

2.2.4 Mood Induction Techniques

Positive Mood was induced by asking the participant to recall an event that made her feel particularly happy. While the participant talked about the event for one minute, the experimenter reinforced words relating to positive emotion, for example, "You must have been very happy" or "That must have felt very good", or "Tell me what it felt like". This procedure was adapted from Fabes, Eisenberg, Fultz and Miller (1988). Neutral Mood was induced by asking the participant to describe the room she was in by naming and numbering the objects in the room. Participants were given one minute to talk while the experimenter remained neutral throughout this minute, giving no encouragement or positive feedback. This procedure was adapted from Stegge, Terwogt and Koops (1994).

The mood induction procedure was tested in the *pilot study*. There was a significant difference between the two mood induction groups for Induction Mood (NMI mean = 15.80 (SD=12.75), PMI mean = 77.75 (SD=5.44), $t(7)= -8.98$, $p<.0001$). Therefore, the mood induction was successful.

2.3 Pilot Study

In order to pilot test the mood induction procedure, and establish inter-rater reliability on the liking measures for the experimenter and the independent coder, a pilot study was completed. The pilot study consisted of the same procedure as the main study (see Procedure) except that the mood induction was done before the planning thought listing task. It was noticed that the planning thought listing task cancelled out the positive mood induction, resulting in all participants being in a neutral, or lower, mood immediately before the interaction. Therefore, the planning thought listing task was completed before the mood induction procedure for the main study. Relevant results of the pilot study have been discussed. In summary, the pilot study established that the mood induction techniques were effective and that there was satisfactory interrater reliability for the Making Friends Rating Scale.

2.4 Procedure

Participants waited alone in an *ante* room before the experimental session and were tested individually in an experimental room. This room was set up with 2 chairs facing each other on one side of the room and a video camera on the opposite side of the room, facing the chair used by the participants. In order to have a frontal view of the participants' faces, only the participant's head and chest were videotaped. The confederate was not in view, but her voice was audible on the videotape.

Initially, two minutes was spent building rapport. The experimenter introduced herself, welcomed the participant and asked her about her classes. In order to establish a *base mood*, the participant was then asked to rate her current mood state by marking a mood thermometer. Once she had done this, she was informed that she would be marking a mood thermometer another three times during the experiment, and that each time she should ignore her

previous responses, and mark the thermometer according to her mood at that time. She was then told that she would be meeting a stranger, and that her task was to try and get the stranger to like her. She was instructed not to tell the confederate that she was trying what her goal was. The experimenter explained that everyone wants to be liked and that, under everyday conditions, people go about pursuing that goal without thinking too much about it. The experimenter then requested the participant to think about how she would go about getting the stranger to like her, paying particular attention to what she would do and what feelings she thought would be helpful. The participant then completed the planning thought listing task. After completion of the thought listing task, she was asked to rate her mood again (*planning mood*). The mood induction procedure followed and after the mood induction, the participant was asked to rate her mood again (*induction mood*). The experimenter then left the room to call the confederate (who was in a room adjacent to the interview room) and brought her into the interview room. The interviewer introduced the participant to the confederate by saying, "____ this is Meg: Meg, this is ___". The confederate sat in the chair that the experimenter had been using. The experimenter gave the following standardised instruction, "I'm going to switch the videotape on and make sure it's working. Good. See you in five minutes". The experimenter then left the interview room for five minutes. The interaction was videotaped. After five minutes, the experimenter knocked on the door, entered the interview room and said, "Thank you, Meg". The confederate said, "Nice to meet you" to the participant and left the room. After the confederate left, the participant was asked to rate her mood once more (*task mood*), and then complete the Making Friends Rating Scale as detailed in the Materials section. The final task for the participant was to complete the interaction thought listing task.

The participant was then warmly thanked for her participation and was assured of the value of her contribution to this research. The experimenter asked the participant not to reveal any details of the experiment to anyone who had not been through the procedure. Finally, the experimenter asked the

participant to express her thoughts and feelings about her experience of the experiment and all positive thoughts and feelings were reinforced by the experimenter. This was done in order to ensure that each participant left the experiment in a positive mood. (See Appendix F for complete script used by the experimenter).

The confederate completed the Making Friends Rating Scale for each participant immediately after each interaction session. At a later time, the experimenter and an independent coder separately completed the Making Friends Rating Scale for each participant after watching the videotaped interactions.

Once all participants had completed the procedure, a debriefing information sheet was sent to each participant, outlining the aims, and explaining the procedures of the study. (Appendix H). No indications of findings were given to participants at that time.

This study was reviewed and approved by the University of Canterbury Human Ethics Committee (Appendix I).

3. RESULTS

The results are presented in 4 sections: Mood ratings; Thought listing (Coding procedures and Analyses); Liking (Internal consistency of the checklist, Experimenter and Independent coder reliability, and Analyses); Correlations; and Regression Analyses.

3.1 Mood ratings

Mood ratings were made by the participants at four phases during the experiment: A base mood at the beginning, a planning mood after completing the planning exercise, an induction mood after the induction procedure and a task mood after the interaction with the confederate. The possible minimum and maximum scores were 0 and 265 respectively, with a higher score indicating more positive mood.

A 2 (Mood Induction: Neutral/Positive) X 4 (Age category:11-12/13 -14/15 -16/17-18) X 4 (Phases: Base mood/Planning mood/Induction mood/Task mood) mixed model ANOVA with repeated measures on the third factor revealed a significant main effect of phases, $F(3,153) = 32.82$, $p<.0001$, which was qualified by a significant interaction between mood induction and phases, $F(3,153) = 12.41$, $p<.0001$. This interaction is illustrated in Figure 1.

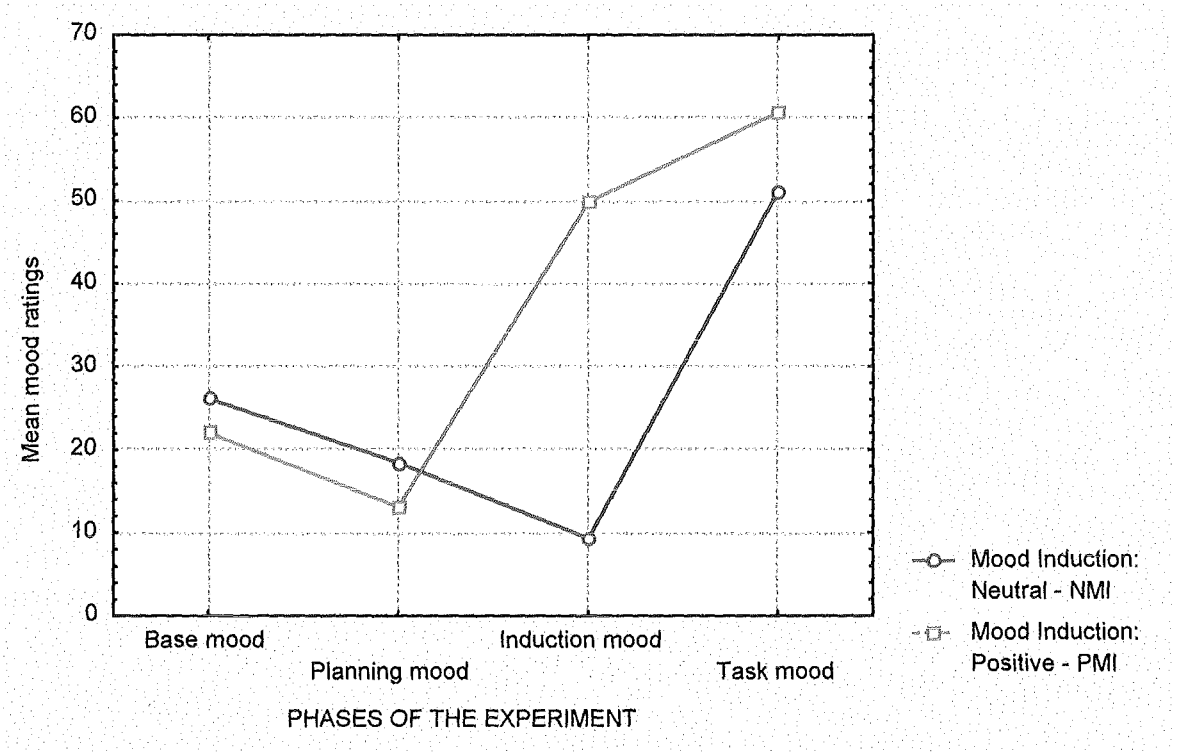

Figure 1. Mean mood ratings as a function of mood induction and phases of the experiment.

Post hoc analyses were conducted between the positive and neutral mood induction conditions for each phase and separately for each mood induction condition. Tukey Honesty Significant Difference for unequal *N* (HSD-un) tests ($p<.001$) showed the following significant results:

1. There was a difference between the positive and neutral mood induction conditions (NMI and PMI) for induction mood only, (*M*s = 8.57 (*SD*=12.33) vs 51.31 (*SD*=30.59)).
2. For the PMI condition, the only significant difference between phases was between the planning mood and induction mood (*M*s = 13.28 (*SD*=32.26) vs 51.31 (*SD*=30.59)).
3. For the NMI condition, the only difference between phases was between the induction mood and task mood (*M*s = 8.57 (*SD*=12.33) vs 50.70 (*SD*=31.64)).

Therefore, the mood induction was effective in raising the mood of participants in the PMI condition above that for participants in the NMI condition. For the PMI participants, the positive mood induction elevated mood

from the planning phase, and this elevated mood was maintained throughout the interaction with the confederate. For the NMI participants, mood was elevated during the interaction with the confederate, up to the same level as the PMI participants after the interaction.

3.2 Thought Listing

3.2.1 Coding procedures

The following criteria were adopted for coding of the two thought listing protocols (planning and interaction):

1. Only positive and negative statements were coded. Neutral statements like, "I was thinking about what she looked like" were not coded. From a total of 645 statements there were only 4 such neutral statements (0.6%).
2. Repetitions were excluded. For example, if a participant wrote "I will act happy" and also wrote, "I will be happy", only one statement was coded. However, variations of a word with a similar meaning, such as "happy" and "cheerful" were coded separately.
3. Negations of a previously coded statement were excluded. For example, if a participant wrote, "I will be relaxed" and later wrote, "I will not be tense", only one statement was coded.

Positivity and negativity of thoughts were measured by calculating the percentage of a participant's thoughts that were positive and negative. This calculation was done separately for the Planning task and the Interaction task, giving 4 scores - percentage planning positivity (%PP), percentage planning negativity (%PN), percentage task positivity (%TP), and percentage task negativity (%TN). Since positivity and negativity are necessarily complementary for each task, only percentage positivity (%PP, %TP) was included in subsequent analyses. (See Appendix G for examples of thoughts and feelings from planning and interaction thought listing tasks).

3.2.2 Analyses

A 2 (Mood Induction: Neutral/Positive) X 4 (Age category:11-12/13-14/15-16/17-18) X 2 (Time: %PP/%TP) mixed model ANOVA with repeated measures on the third factor revealed only a main effect of time, $F(1,51)=123.54$, $p<.0001$. A higher percentage of statements were positive in the planning task compared with the interaction task (100% vs 58.99%)

3.3 Liking

3.3.1 Internal consistency of the checklist

As discussed previously, overall liking was rated by the first item in the checklist (minimum = 1, maximum = 7).

A principal components analysis of the remaining 9 emotion items related to liking (friendly, natural, warm, encouraging, happy, positive, smiling, talking, eye contact) across all 4 raters for all participants (236 cases) revealed a large single factor, on which every item loaded at .70 or higher. The Eigenvalue of the factor was 5.93, thereby accounting for 59.3 of the variance in the ratings. Since the internal consistency of the 9 items was high, it was decided to collapse the 9 item scores, and use the mean of their aggregated score (minimum 1, maximum 7) as a single score of the positive emotion cues related to liking (positive emotion). The Pearson Product Moment correlation between the single item of overall liking and the single score of positive emotion was $r = .63$ ($p<.001$)

3.3.2 Experimenter and independent coder reliability

The experimenter's liking ratings and positive emotion ratings correlated with the independent coder's liking ratings and positive emotion ratings, respectively, $r = 0.99$, and $r = 0.97$ ($p<.01$). On the basis of these high correlations, means were calculated of the experimenter's and the independent coder's ratings and these were subsequently used as the observer measures (O).

Therefore, there were 3 raters used in the analyses - the participant (P), the confederate (C), and the observer (O), and 2 measures - liking and positive emotion.

3.3.3 Analyses

A 2 (Mood Induction: Neutral/Positive) X 4 (Age category:11-12/13 -14/15 -16/17-18) X 3 (Rater: P/C/O) mixed model ANOVA with repeated measures on the third factor for the liking measure only, revealed a significant main effect of age category, $F(3,51)=3.03$, $p<.05$. This main effect was qualified by a significant interaction between age category and rater, $F(6,102)=2.19$, $p<.05$. This interaction is illustrated in Figure 2.

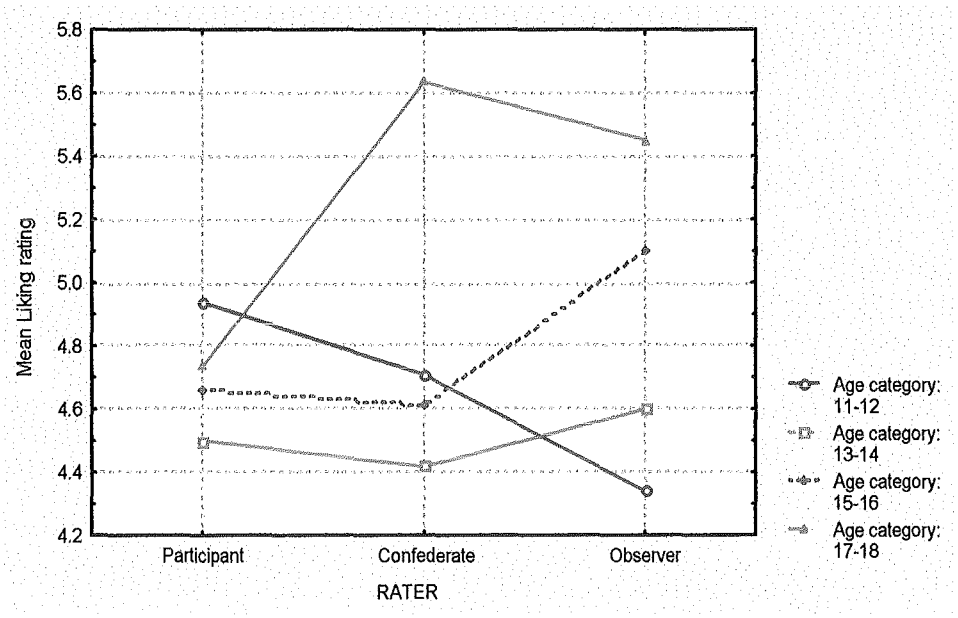

Figure 2. Mean liking ratings as a function of age category and rater

Post hoc analyses (Tukey HSD-un tests) conducted separately between the age categories for each rater and between the raters for each age category, revealed only the following result that was significant:

1. The confederate rated the 17-18 age category higher than the 13-14 age category (*M*s= 5.64 (*SD*=.67) vs 4.42 (*SD*=1.14), p=.05)

A 2 (Mood Induction: Neutral/Positive) X 4 (Age category: 11-12/13 -14/15 - 16/17-18) X 3 (Rater: P/C/O), mixed model ANOVA with repeated measures on the third factor for the emotion measure only revealed a significant main effect of age category $F(3,51)=3.14$, $p<.05$ and a main effect of rater, $F(2,102) = 44.58$, $p<.0001$. These main effects were qualified by a significant interaction between age category and rater, $F(6,102)=2.09$, $p<.05$. This interaction is illustrated in Figure 3.

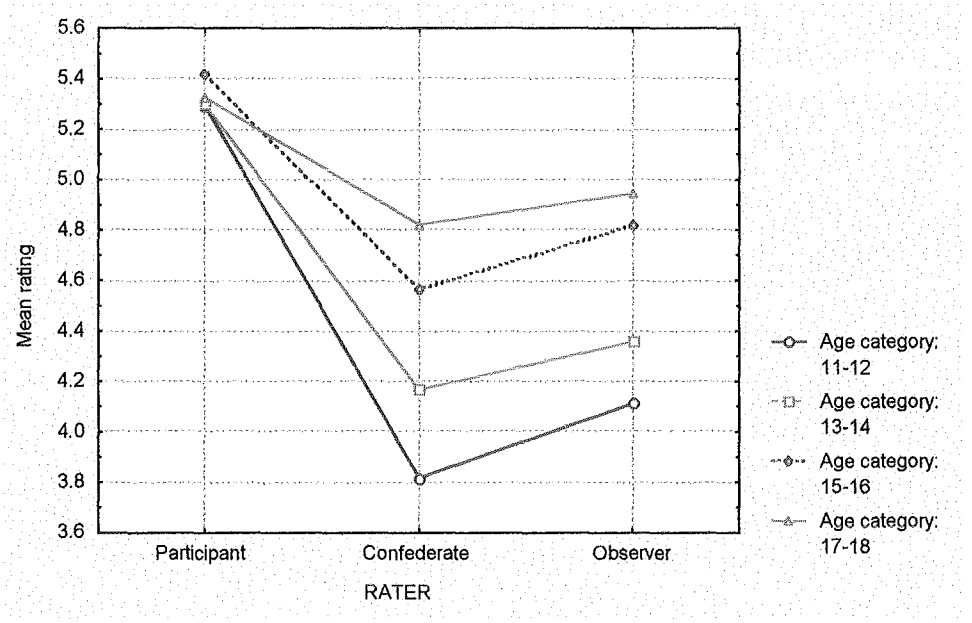

Figure 3. Mean positive emotion expression ratings as a function of age category and rater

Post hoc analyses (Tukey HSD-un tests) conducted separately between the age categories for each rater and between the raters for each age category, revealed the following significant results:

1. In the 11-12 age category, participants rated themselves higher than either the confederate or the observer who did not differ from one another (*Ms*= (P) 5.29 (*SD*=.84) vs (C) 3.82 (*SD*=.98) vs (O) 4.12 (*SD*=.95), $p<.001$).
2. In the 13-14 age category, participants rated themselves higher than either the confederate or the observer who did not differ from one another (*Ms*= (P) 5.30 (*SD*=.69) vs (C) 4.17 (*SD*=.86) vs (O) 4.37 (*SD*=.61), $p<.001$).
3. In the 15-16 age category, participants rated themselves higher than the confederate (*Ms*= (P) 5.42 (*SD*=.57) vs (C) 4.56 (*SD*=.70), $p<.01$).

4. The confederate rated the 17-18 age category higher than the 11-12 age category (*Ms*= 4.82 (*SD*=.49) vs 3.81(*SD*=.98), p<.01).
5. The observer rated the 17-18 age category higher than the 11-12 age category (*Ms*= 4.94 (*SD*=.68) vs 4.11(*SD*=.95), p<.05).

3.4 Correlations

In order to investigate the relationships between the raters' measures of liking and positive emotion, age, taskmood and percentage positivity about the task, Pearson Product Moment correlations were computed with these variables. Since there was no effect of mood induction on liking, the positive emotion measure or on percentage positivity or negativity for the planning exercise or the interaction task, it was decided to collapse the data across the two mood induction conditions for the purpose of the next two analyses. There was no variance in percentage positivity and negativity for the planning exercise (100 percent and 0 percent respectively), so these were not included in the variables analysed. Since percentage negativity about the task and percentage positivity about the task are necessarily complementary, only percentage positivity about the task was included. Age was entered as a continuous variable in order to be able to include it in the analysis. The correlation matrix is presented in Table 1.

	Age	Task Mood	Liking (P)	Liking (C)	Liking (O)	Pos.Em. (P)	Pos.Em. (C)	Pos.Em. (O)	%TP
Age	_								
Taskmood	-.20	_							
Liking (P)	-.10	.36**	_						
Liking (C)	.25*	.11	.34**	_					
Liking (O)	.45**	-.09	-.09	.33**	_				
Pos.Em. (P)	-.02	.36**	.48**	.42**	.18	_			
Pos.Em. (C)	.41**	-.19	.10	.68**	.59**	.28*	_		
Pos.Em. (O)	.37**	-.13	-.02	.39**	.87**	.25*	.71**	_	
%TP	.03	.37**	.46**	.34**	-.00	.44**	.15	.05	_

Table 1. Pearson Product Moment correlations (n=59) between the raters' measures of liking and positive emotion expression, age, taskmood and the percentage task positivity measure.
(*=p<.05; **= p<.01). %TP=percentage positivity about the task.
Pos.Em.= Positive emotion expression.

1. Liking and positive emotion correlated for the participant, for the confederate, and for the observer.
2. Taskmood was positively related to all three of the participant's ratings; her percentage positivity about the task, her rating of her expression of positive emotion and how much she thought the confederate liked her. However, taskmood was unrelated to the confederate or observer's liking ratings or ratings of positive emotion.
2. The participant's rating of how much she thought the confederate liked her was positively related to how much the confederate did like her, but was unrelated to the observer's liking rating.
3. The confederate's liking rating was positively related to the participant's liking rating and the observer's liking rating; the confederate's liking rating was also positively related to all three of the ratings of positive emotion expression.

4. The participant's rating of positive emotional expression was related to the confederate and the observer's ratings of positive emotional expression (for the observer, this relationship was marginally significant, p=.055).
5. The participant's age was related to the confederate's liking rating (this relationship was marginally significant, p=.055) and the observer's ratings of liking and positive emotion.

3.5 Regression analyses

In order to be able to identify which variables predicted liking, three multiple regression analyses were conducted with liking ratings for the participant, confederate and observer serving as the dependent variables. One of the main research questions was whether positive mood in the ingratiator increased liking in others; therefore, the taskmood of the participants was also included. Age was again entered as a continuous variable. The predictor variables included were taskmood, age, positive emotion ratings and percentage positivity about the task. For the participant, the confederate's liking rating was included in order to investigate the effect of the confederate's liking rating on the participant's liking rating. Similarly, for the confederate, the participant's liking rating was included. For the observer, the liking ratings of both the participant and the confederate were included.

The participant

The overall regression analysis was significant, $F(5,53) = 5.74$, $p<.001$. There were two marginally significant effects.

(a) The effect of the participant's positive emotion rating was $\beta = .250$, $t(53) = 1.85$, $p=.06$

(b) The effect of percentage positivity about the task was $\beta = .249$, $t(53) = 1.19$, $p=.06$

The amount of variance accounted for by the variables included in this analysis was 28.99% ($R^2 = .2899$).

The confederate

The overall regression analysis was significant, $F(5,53) = 13.43$, $p<.0001$. There was only a reliable effect of the confederate's positive emotion rating, $\beta = .664$, $t(53) = 6.37$, $p<.001$. The amount of variance accounted for by the variables included in the analysis was 51.73% ($R^2 = .5173$)

The observer

The overall regression analysis was significant, $F(6,52) = 31.37$, $p<.0001$. There were two reliable effects.

(a) The effect of the observer's positive emotion rating was reliable, $\beta = .819$, $t(52) = 11.03$, $p<.001$.

(b) The effect of age category was reliable, $\beta = .157$, $t(52) = 2.20$, $p<.05$.

The amount of variance accounted for by the variables included in the analysis was 75.85% ($R^2 = .7585$).

In summary, the participants' positivity about the task and their self-rating of positive emotion predicted how much they thought the confederate liked them. The confederate's positive emotion rating of the participants predicted how much she liked the participants. For the observer, both her positive emotion ratings of the participants and the participants' age category predicted how much she liked the participants. The variables included in the analyses accounted for differential percentages of the variance in each dependent variable. For the participant, the variables entered in the analyses accounted for only about 30 percent of the variance. For the confederate, this percentage increased to almost 50 percent and for the observer it increased further to almost 75 percent.

4. DISCUSSION

The main results of this study can be as summarised as follows: the mood induction procedure was successful; the mood of participants in the neutral mood condition became elevated during the interaction task; the measure of positive emotion expression predicted liking for all three raters; both the confederate and observer rated the older participants higher than the younger participants on the expression of positive emotion; the age of the participants predicted only the observer's liking ratings; the consensus between participants' self-ratings of positive emotion expression and the confederate and observer's ratings of the same was lowest in the youngest age category and higher in each older category.

In view of the complexity of the results and the number of hypotheses being investigated, a model was developed to provide a framework for the results summarised above. The constituents of the model represent the variables that were investigated in the present study and processes described in the relevant literature. The participant, the confederate and the observer were conceptualised as being part of an ingratiation system comprising all constituents in dynamic interaction. Once the model was explicated, explanatory theory was developed to account for the ingratiation system. The relationships between the constituents of the model were posited by integrating the present results and substantive theory in the domain. The model has been named the Expressiveness, Liking and Links to Emotion (ELLE) model, and integrates cognitive, emotional and behavioral aspects of the processes plausibly involved in the ingratiation task. ELLE is illustrated in Figure 4.

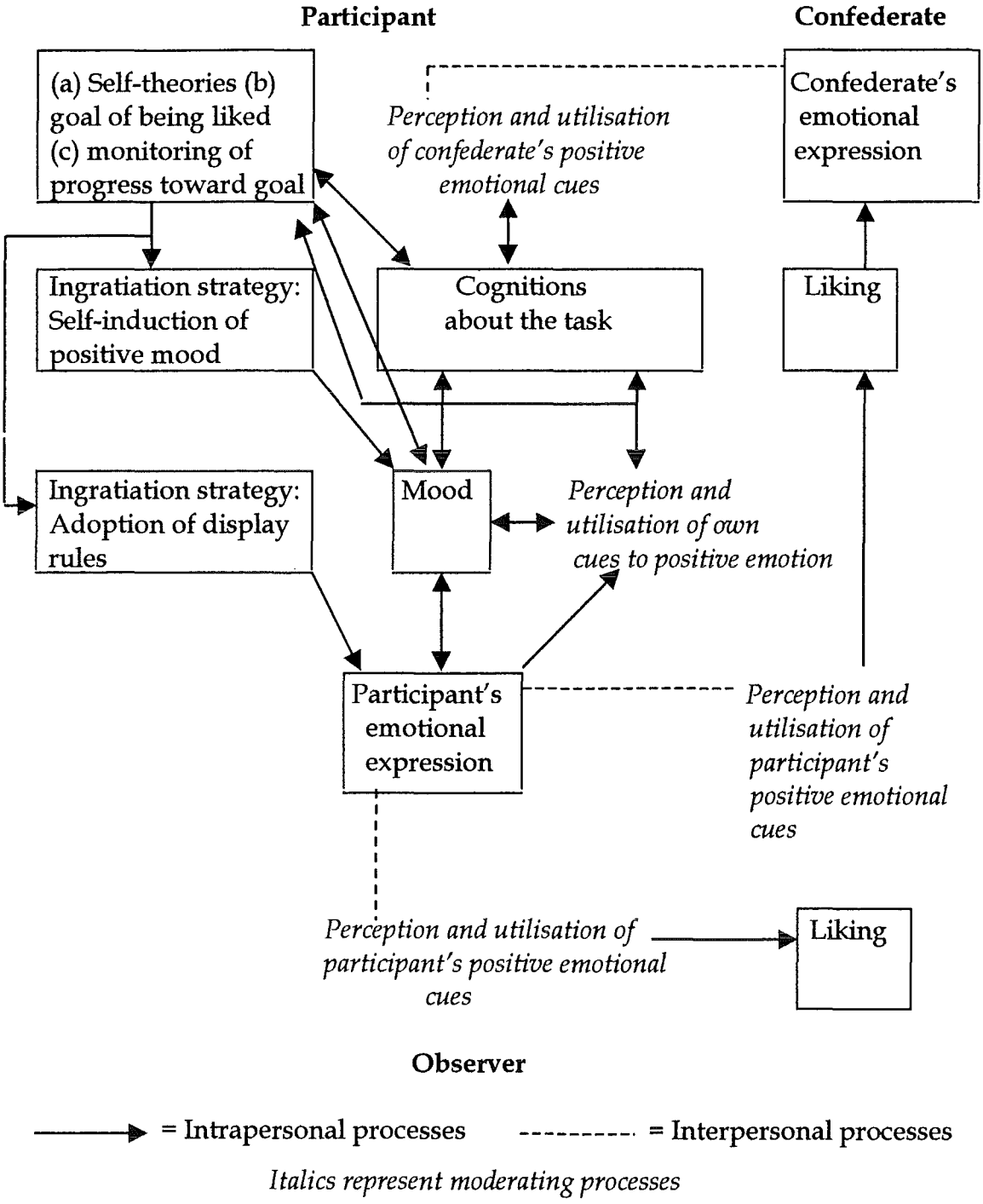

Figure 4. An integrated model of the constituents of the ingratiation system (ELLE)

The results of the present research map onto the model in the following way: Task mood ratings are contained in "mood"; thought listing analyses are contained in the "cognitions about the task"; liking ratings made by the confederate and the observer are contained in the two "liking" constituents, and the liking rating made by the participant is contained in the "goal of being liked and monitoring of progress towards the goal" constituent; ratings of positive

emotional expression made by the confederate and the observer are contained in the "perception and utilisation of participant's available emotional cues" constituents, and self-ratings of positive emotional expression are contained in the "perception and utilisation of own emotional cues". The results will now be used to make links between the constituents. First, the correlations in Table 1 and the regression analyses (section 3.5) show the relationships between the participant's *intrapersonal* processes (monitoring of progress towards the goal of being liked, mood, cognitions about the task, perception and utilisation of her own positive emotion cues). Similarly, the correlations in Table 1 and the regression analyses show the relationships between the intrapersonal processes of the confederate and the observer (ratings of positive emotion expression and liking ratings). The emphasis in the present research was on the participant, and this is reflected in the large number of intrapersonal relationships for the participant. Should the emphasis have been on the confederate, it is likely that the number of intrapersonal relationships for the confederate would have been greater. It is also likely that many of the intrapersonal processes depicted for the participant are common to the confederate and the observer as well. Intrapersonal relationships between constituents are illustrated in ELLE by solid arrows. The *interpersonal* relationships between constituents, taken from the same sources as the intrapersonal relationships, are illustrated in ELLE by broken lines.

The present results have been integrated with the theories of interpersonal perception proposed by Kenny (1994) and Funder (1995), and the theory of Interpersonal Facial Feedback proposed by Cappella (1993). Cappella's (1993) proposal of the existence of an affective loop between persons in a dyad characterises the ingratiation system as comprising intrapersonal and interpersonal constituents. The affective loop is made possible by the existence of separate expressive and experiential emotional subsystems, and the interactive effects of participants' emotional expression on each other's emotional experience. The assumption is that the valence of the emotional

expression of one person induces a matching valence in the expression and experience of the other.

As a result, there are processes included in ELLE that were not directly addressed in the present work. However, it is necessary to incorporate these in order to produce a coherent theory to account for the results obtained in this study.

Since ELLE is presented as a general model of the processes and relationships involved in an ingratiation system, and should therefore apply irrespective of age, the independent variable of age will be addressed as a separate issue later in the discussion.

Intrapersonal processes

Kenny (1994) proposed that meta-perception (the participant's ratings of how much they thought the confederate liked them) is the result of self-perception (theories about, and observations of, the self). In ELLE, this theory would account for the relationships between the participant's: emotional expression, the perception and utilisation of their own cues to emotion, mood, percentage positivity about the task, self-theories, and monitoring of progress towards the goal of being liked. The relationship between emotional expression and mood is further supported by Capella's (1993) description of an experiential emotional subsystem, in which one's mood is directly influenced by one's facial expression.

Participants could have made judgements about how much the confederate liked them based on self-perceptions. Some of the thoughts from the thought listing protocols support this notion. For example, statements like, "I thought of heaps of things to say", "I wanted to carry on", "I thought I seemed a bit eager", "I felt happy/ curious/ positive/ interested/ excited" suggest that participants were monitoring their own thoughts, feelings and behaviors. This could have contributed to their ratings of how much they thought the confederate liked

them. The strong positive correlations found between participants' positivity about the task and self-ratings of liking support this possibility. In this case, the participants' judgements of how much the confederate liked them will have been partly dependant on the positive cues they perceived in themselves, and will have been directly influenced by their mood, percentage positivity about the task and perception of their own cues to emotion. The present results concur with the relevant aspects of Kenny and Cappella's theories mentioned immediately above.

A further contributing factor to percentage positivity about the task might have been participants' expectations of success. Bandura (1989) has long espoused the notion that self-efficacy is a major motivator in human action and goal setting and striving, and the causal contribution of self-efficacy beliefs to human functioning has been well researched (for a summary of this research see Bandura, 1989). Bandura (1991b) extends the theory of self-efficacy to the exercise of control over social environments. Beliefs about self-efficacy will form part of the self-theories contained in ELLE. Therefore, in the present research, it is likely that participants' beliefs about their ability to make the confederate like them will have affected the intrapersonal processes illustrated in ELLE. For example, a belief that one is socially inept could reduce ingratiation attempts and produce negative emotion in the system. However, this issue was not addressed by the present research and is in need of further investigation.

If, as has been suggested previously, people self-induce positive mood in order to make their expression of positive mood congruent with their experienced emotion in an ingratiation task (Baumeister, 1982; Hochschild, 1983; Parkinson, 1991), then the strategic self-induction of positive mood will directly influence both cognitions about the task and emotional expressiveness. Similarly, the use of display rules will impact directly on the participants' emotional expression (Ekman, 1972; Malatesta, et al., 1989; Saarni, 1990; Saarni & von Salisch, 1993), and thereby their mood. The adoption of socially sanctioned facial expressions of positivity would trigger the facial feedback

mechanism that could elevate mood. While these processes have been described by the researchers cited above, the present research explicitly integrates these processes into the ingratiation system.

Interpersonal processes

The positive relationship between both the confederate and observer's liking ratings and their respective ratings of the participants' positive expression of emotion can be explained by Funder's (1995) RAM. By detecting and utilising the available cues to positive emotion in the participants' expressiveness, the confederate might have made her judgement of liking. The participant's emotional expression would also have been detected and utilised by the observer in her judgements of liking.

According to Funder's RAM, the participant would have detected available, relevant cues in the target's behavior, and from the utilisation of these would have judged how much the confederate liked her. Some of the thoughts from the interaction thought lists support this notion. For example, statements like "she looked interested", "she was encouraging", "we got on well" suggest that participants were looking to the confederate for cues to her positive emotion. These detected cues might have increased positivity about the task and thereby affected participants' judgement of the impression they were making. ELLE suggests that the participants used cues both from the confederate and from the self, not one or the other.

Cappella's (1993) Interpersonal Facial Feedback Hypothesis proposed a further effect of the participant and the confederate's emotional expression on each other, that of behavioral matching. The process of behavioral matching has been researched by Cappella (1997), Gergen and Wishnov (1965), Newtson and Czerlinsky (1974), and Schlenker and Goldman (1982). Imitating another's behaviors is an indirect form of flattery, often used as an ingratiation strategy. Cappella (1995) has argued that the imitation of partners' smiling in social interactions is a behavior that has evolved as part of social co-operation. Thus, the participant will imitate the confederate's positive emotional expressions,

and the very act of this expression may give rise to positive mood, according to the facial feedback hypothesis. Consequently, the participant's judgement of how much she is liked will derive from a path running from the confederate's emotional expression to the participant's imitation of that expression, subsequent mood elevation and consequent positivity about the task due to the perception of that elevated mood and positive emotional expression. The confederate's rating of the participant's emotion expression may be based on that matched emotion expression, which will have been magnified by a feedback path from positivity about the task, via elevated mood to emotional expression. Additionally, it is possible that the confederate's own positive emotional expression and consequent mood elevation may have affected her utilisation of the participant's available emotional cues. In the present research, the confederate did not rate her mood, nor did the participants rate her on her emotional expression. Therefore, it was not possible to explore these possibilities.

It must be noted that, since it was positive emotion that was investigated in the present research, there is an assumption of positive emotional expression on the part of the confederate in this discussion. It is not within the scope of this thesis to lay out the various factors that could influence the confederate's expression of emotion. Suffice it to say that factors like reciprocal behavioral matching (Cappella, 1993; Ekman, 1972; Malatesta et al., 1989; Saarni, 1990) would impact on the confederate's emotional expression. If the confederate's emotional expression is negative, the emotional content of the affective loop will presumably become negative. However, the ingratiation strategies shown in ELLE are not part of this affective loop, as positive emotional experience and expression can be self-induced by the participant in the face of negatively valenced emotional expression by the confederate. Therefore, they can be implemented without reference to the confederate's emotional experience. Thus, the self-regulation of emotion and application of display rules proposed as ingratiation strategies are outside of the affective loop proposed by Cappella (1993) and are independent of the confederate's emotional expression. These

processes can therefore be seen as adaptive strategies for overcoming resistance or negative feedback from the confederate. Either by using display rules to adopt positive expressions, or by self-inducing positive mood, participants could have generated positive emotional experience and expression. It may be that participants were able to present positive emotion effectively despite some negative emotional internal experience (only 59% of their thoughts about the task were positive). This ability may have been a function of their knowledge of display rules. The results suggest that all of the participants in this study were aware of the display rules operating in their culture. Participants planned to be 100% positive about the task (that is, every statement made during the planning exercise reflected an intention by the planner to express positive emotion). See Appendix G for lists of positive planning behaviors and positive planning feelings. It is clear that all participants believed that expressing positive emotion would make them more likable. It may well be the case that the sample of the population, who were participants in this study, have been thoroughly taught (by parents and other adults) the appropriate ways in which to behave when trying to make a friend. Although the cultural affiliations of the participants were mixed, they were all attending a school that represents mainstream, western cultural values. It remains for future research to determine whether participants of different sex, socio-economic status, and within different socio-cultural contexts, would have the same ideas about how to go about being liked.

Having presented the results in the form of a model (ELLE), and having integrated these results with substantive theory in order to explain the processes in the model, the discussion of the results will follow the order of the six research hypotheses presented in the introduction. This will be followed by conclusions, limitations and implications of the present research, and directions for future research.

Before discussing the research hypotheses, it is necessary to clarify the relationship between correlational data and causality. In social science research

researchers are frequently concerned with drawing causal inferences from correlational data. They proceed mindful of the statistical adage that correlation does not imply causation. In the simplest case, this adage is generally taken to mean that a correlation between two variables, X and Y, alone, is not sufficient for inferring the particular causal relationship "X causes Y" (Haig, 1992). Woodward (1989) argues that decisions about which variables to include in regression analyses, or causal modeling more generally, appeal to general theoretical considerations about whether the predictor variables are possible causes of changes in the dependant variables. By considering well-developed theory, together with correlations in the results, it is legitimate to make inferences about causality. Since the results of the present study are integrated with substantive theory, this discussion will frequently make reference to causality.

4.1 Hypothesis 1

There will be a positive relationship between the participants' experience of positive emotion and their expression of positive emotion.

In order to explore this hypothesis, the relationships between the participants' self-ratings of mood, positivity about the task, and emotional expression were investigated, as were the relationships between the confederate's and the observer's ratings of the participants' emotional expression and the participants' self-ratings of emotional experience.

According to the participants' self-ratings, there was a positive relationship between their expression of positive emotion and their experience of positive emotion (as measured by both percentage positivity about the task and task mood). Higher ratings of both mood and positivity about the task were associated with higher ratings of positive emotional expression. For the confederate and the observer, there were no significant relationships between their ratings of the participants' emotional expression and the participants' self-rating of emotional experience.

ELLE illustrates the participants' intrapersonal relationships and provides a postulational theory to account for them. However, the direction of causality in these relationships is difficult to establish due to the dynamic nature of the interactions involved. It is difficult to disentangle the participants' emotional experience from their emotional expression. Nevertheless, it is clear that the participants' positivity and mood were related to their expression of positive emotion.

Future research could also attend more closely to the relationship between the participants' experience of emotion and the confederate and observer's ratings of her emotional expression. Although it seemed that the confederate and observer's ratings of the participant's positive emotional expression were not related to the participant's emotional experience, this may be a function of the design of the materials used in the experiment. The Making Friends Rating Scale completed by the confederate and the observer did not address the participants' emotional experience directly. Items were phrased as "How positive do you think the participant appeared?" not "How positive do you think the participant felt?", and might not have tapped the emotional experience of the participants. The word "appeared" was used in an attempt to elicit objective ratings of the participants' expression of positive emotion rather than the confederate and observer's subjective reactions to the participants' expressions. However, it could be argued that the wording of the items might have elicited ratings of skill along with intensity level ratings from the confederate and the observer. So, the question, "How encouraging do you think the participant appeared?" may have been interpreted as, "How skilled do you think the participant was at appearing encouraging?" The evaluative nature of the task may have elicited ratings of skill as much as levels of intensity, and the use of the word "appeared", rather than a direct question such as "How encouraging was the participant?" may have primed the raters to rate the participants' skill at "appearing" to express a certain emotional state. These issues surrounding the wording of the items in the Making Friends Rating Scale will need further work.

In summary, the relationship between the participants' experience and expression of emotion is a complex one with possible feedback mechanisms operating in dyadic interaction. The critical point is that there is a direct and positive relationship between the participant's experienced and expressed emotion. Thus, hypothesis 1 was supported.

4.2 Hypothesis 2

Adolescents who express more positive emotion will be more liked by the confederate and the observer.

The positive correlations between all three raters' measures of liking and between their measures of emotional expression may suggest that either (a) raters measure how much they like someone by their judgements of emotion expression, or conversely, (b) they measure emotion expression by how much they like someone. Similarly, in the regression analyses reported in section 3.5, ratings of the expression of positive emotion predicted liking ratings for all three raters, but the reverse predictions will also be appropriate. While it is not possible to determine the direction of causality in the present results, there is a strong relationship between the expression of positive emotion and liking.

So, the relationship predicted in hypothesis 2 was supported, although the directionality of the causal paths could not be firmly established. These results are similar to those of other researchers who have found that the expression of positive emotion is related to likability (e.g. Clark, et al., 1996; Jones, 1990; Jones & Pittman, 1982).

4.3 Hypothesis 3

Those participants in the neutral mood condition will self-regulate their emotions, making them positive during the interaction task.

The mood induction procedure was obviously successful (see Figure 1). After the mood induction procedures, those in the PMI group felt significantly more positive than those in the NMI group. However, after the interaction, those in the NMI group reported feeling as positive as those in the PMI group. After the interaction task, there was no significant difference in mood between the two mood induction groups. Clearly, some mechanism raised the mood of NMI participants.

There are at least three competing plausible explanations for this mood elevation. First, the participants may have self-induced positive mood in order to make their experienced emotional state congruent with their expressed positive emotions (e.g., Baumeister, 1982; Hochschild, 1983; Parkinson, 1991; Wegner & Erber, 1993). Second, the interaction with the confederate may have been mood elevating in and of itself (e.g., Connell & Wellborn; 1990; Deci & Ryan, 1991). Third, the assumption, by the participants, that they had achieved their goal (getting the stranger to like them) may have produced positive emotion (e.g., Carver & Scheier, 1990).

Concerning the first explanation, because the participants all recognised that both experiencing and expressing positive emotion was an effective strategy for being liked (planning thought listing revealed 100% of statements about planned behaviors and feelings to be positive), it is not implausible to suggest that they might have self-induced positive mood. Since, in the study by Godfrey, et al.(1986), participants did carry out their planned strategies for ingratiation, it is plausible to suggest that participants in the present study also did so. There are two reasons that they might have self-induced positive mood. First, authenticity increases the credibility of the performance (Fiske & Taylor, 1991; Hochschild, 1983; Jones & Pittman, 1982). Positive emotional experience

would have prevented the leaking of any emotion that might have been at odds with the positivity they were expressing, and thereby prevented the revelation of their ingratiation strategy. Second, as Gecas (1991) has suggested, the experience of authenticity is a powerful motivation in the development of the self-concept. It is more satisfying to be liked when one's behavior is congruent with the way one feels than if feeling and behavior are incongruent. To be liked when one is being authentic enhances the self-concept. Thus, not only does authenticity make the performance more credible, it also provides a positive experience of the self as meaningful and real.

In terms of the second explanation, Connell and Wellborn (1990) and Deci and Ryan (1991) have suggested that relationships seem to offer satisfactions that are independent of the drive-based securities they often provide. Baumeister, Heatherton and Tice (1994) pointed to the arousing nature of social interaction, including such emotional reactions as excitement, nervousness, anxiety, sexual attraction, and many others. This may mean that the very act of interacting with another person in a non-threatening way may be mood enhancing. Participants may have become more positive simply as a function of interacting with another person. However, Geen (1991) concluded from a review of the empirical studies that have investigated the effects of the "mere presence" of others on people's affective states, that the arousal reported in these studies should be thought of as an aversive emotional state. He suggested that such arousal is partly due to apprehension over being evaluated by others. In the present study, statements from the interaction thought listing task illustrate this apprehension. Statements such as "I felt I was coming across a bit negative", "I don't want to sound stupid", "I felt she didn't like me" suggest that the interaction was not purely pleasurable. Additionally, developmental work by Kagan, et al.(1987) has found that about 33% of children are, by virtue of their temperament, aversive to social interaction. Therefore, it seems unlikely that the social interaction would have been pleasurable to all participants. Given that the present results show that all participants experienced an

elevation in mood during the interaction, the argument that mood was elevated as a function of social interaction is less plausible.

With regard to the third explanation, Carver and Scheier's (1990) control theory model of goal striving would suggest that positive emotion is produced as a result of the rate of progress towards the goal being faster than anticipated. Participants may have experienced positive emotion as a result of progressing towards their goal of being liked. Other researchers have conceptualised emotions as arising from (a) the degree of goal attainment (Bandura, 1991a; Srull & Wyer, 1986), (b) anticipated goal attainment (Bandura, 1989), (c) "flow" experienced during goal striving (Csikczentmihalyi, 1990), (d) activated current concerns (Klinger, 1987) and (e) judgements of success or failure (Weiner, 1979). Participants may therefore have experienced an elevation in mood simply as a by-product of successful goal striving. Similarly, Geen (1991) suggested that successful social interaction increases feelings of personal competence and builds self esteem, producing positive emotion.

However, as can be seen from Figure 1, there was no such mood elevation effect from the planning task. The successful accomplishment of that task did not elevate mood; on the contrary, it seemed to depress the participants' mood. If successful goal striving was enough to elevate mood, it might be expected that mood would be elevated after the accomplishment of the planning task. This was not the case. That is not to deny the different nature of the two tasks, but if the models of goal striving and the production of emotion are to hold generally, it is not unreasonable to expect some mood elevation during the planning task. While the prospect of the ingratiation task may have caused some negative emotion (e.g., anxiety) that could have dampened positive emotion, accounting for the lack of mood elevation, it seems unlikely that the anticipation would have been overwhelmingly negative.

In summary, it seems unlikely that the positive mood induction experienced by the participants in the NMI condition was due either to the

social interaction itself, or to the effects of successful goal striving. While there may be other alternative explanations, the results of the present research lend support to hypothesis 3, that mood elevation during the interaction was the result of self-regulatory processes.

4.4 Hypothesis 4

There will be a positive relationship between participants' age and their expression of positive emotion.

There was no effect of age on participants' ratings of their expression of positive emotion. All participants, regardless of age, rated their emotional expression equally. These findings might be a function of the tendency of people to rate themselves as more happy than the average person and more skilled than the average person (research summarised in Fiske & Taylor, 1991). The interesting part of the observation is that there were no age differences in this tendency. So it might be reasonable to conclude that the self-serving bias is a phenomenon that, at least during adolescence, is not a function of age. In other words, this bias has been firmly established in children's behavior by adolescence.

However, the confederate and the observer both rated the age categories differentially in terms of their emotional expressiveness. As age of participants increased, so did the confederate and the observer's ratings of emotional expression. There are a number of competing explanations that might account for the age differential in the confederate and observer's ratings. First, it might be that there was an expectancy of increasing emotional expression in both of those raters. DePaulo (1992) pointed out that, when perceivers are trying to distinguish among the many possible interpretations of a particular communication, they can draw from base-rate information about the person and the situation. One piece of information that might aid in interpretation is the age of the actor. The perceiver might assume that older children are more skilled at emotional expression than younger children, having more knowledge,

practice and experience, and are able thereby to create an expectancy of this before making her judgement. Experimental evidence supports the notion that older children are more skilled at the expression of emotion than younger children (e.g., Saarni, 1990), and the social cognition literature is replete with evidence of peoples' expectancies about various issues; for example, Gerber (1993) showed that participants used social schemata to guide social interaction, with stereotypical expectancies being displayed in judgement tasks. Therefore, it is not unreasonable to suggest that the confederate and observer's ratings were influenced by their expectancy that older children would be more skilled at emotional expression than younger children.

Second, an alternative explanation for the relationship between the expression of positive emotion and age is that, since the confederate was a 23-year old adult, the older children felt more at ease with her and thus freer to express emotion. Many of the older participants were in the process of planning their university careers and had an interest in tertiary study in common with the confederate. The phenomenon of ingroup bias has been well established (for a review of the research, see Myers, 1993), and as early adolescence signals the beginning of the drive for individuation and identity (Erikson, 1968) with its accompanying peer group affiliation (Connell, Stroobant, Sinclair, Connell & Rogers, 1975), it is not implausible that the younger participants might have felt expressively inhibited by a stranger from a different age/status group. The older participants may have felt less inhibited with the confederate since they were closer in age and status.

Thus, the particular confederate might have imposed constraints on the expression of emotion in younger participants. If the confederate had been a peer of the younger participants, it is possible that the age/emotional expression relationship might not have been present. In fact, the relationship might have been a negative one. The older participants may have felt inhibited by a younger stranger, in contrast to the present situation where the younger participants may have felt inhibited by an older stranger.

Third, Colvin's (1993) work showed that the development of identity facilitates judgability, and increasing identity resolution results in less self-consciousness (Adams, et al., 1987) and more self-confidence (Helbing, 1984). Consequently, the older participants may have been more comfortable in expressing emotion than younger participants. However, the expectancy effect may still have been present in the age-differential ratings of emotional expression, but rather than being based on expectancies of skill differences, it would have been based on expectancies of differences in self-confidence, self-consciousness and psychological adjustment. The results, and explanations of the results, support Hypothesis 4.

4.5 Hypothesis 5

There will be a positive relationship between participants' age and the liking ratings of the confederate and observer.

While the significant differences between raters for liking ratings were few, the confederate and the observer both rated the oldest children higher than any other age category. It is not inconceivable that the confederate and the observer's preference for the older children might also be influenced by theories of similarity in personal relationships. It has been found that similarity between people predicts their liking for each other (Chapdelaine, Kenny & La Fontana, 1994; Deutsch, Sullivan, Sage & Basile, 1991; Nesler, Storr & Tedeschi, 1993). The confederate and the observer may have identified the older participants as being closer to their own age and status groups, and therefore liked them more. Sharma & Kaur (1991) showed, in a study investigating similarity and liking between female 12-14 year-olds and female 21-23 year-olds, that there was a main effect of age for liking the other person and rating her to be warm. This liking judgement may have positively influenced the ratings of positive emotional expression by the confederate and the observer, because as their liking increased, so their expectancy of positive emotional expression may have increased. These relationship possibilities are illustrated in Figure 5.

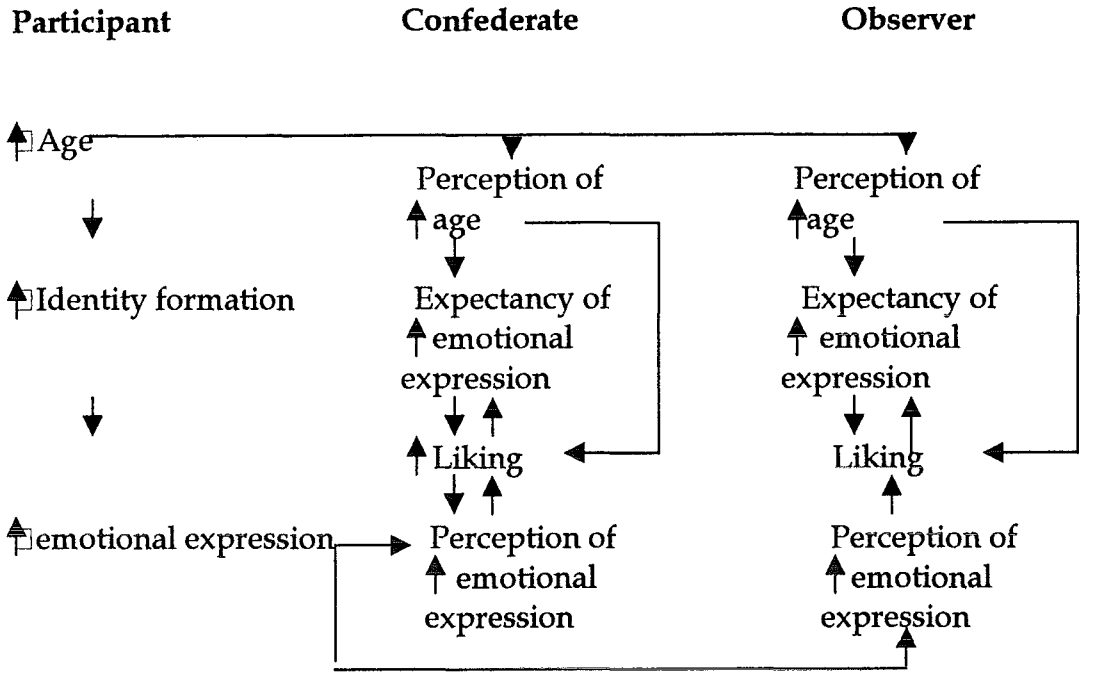

Figure 5. Illustration of the different paths from participants' increasing age to confederate and observer's increasing liking ratings.

In summary, Hypothesis 5 was conditionally supported in that there was only one significant difference between age groups for the confederate and observer's liking ratings.

4.6 Hypothesis 6

There will be less consensus between the ratings of younger adolescents and the confederate and observer, than between those of older adolescents and the confederate and observer.

When participants were divided into their age categories, there were no significant differences between raters for liking ratings (Figure 2). However, Figure 3 shows that the older participants were more accurate than the younger participants in their judgements of their own emotional expression. That is, there was no significant difference between self-ratings of emotional expression and others' ratings of emotional expression for the oldest age category, but the difference between self-ratings and others' ratings became larger as the age category became younger.

Using Funder's (1995) RAM as a suitable framework for interpreting these age differences, four factors need to be addressed. Funder proposed that there were two intrapersonal factors for the judge (the person making the judgement), namely detection and utilisation, and two intrapersonal factors for the target (the person being judged), namely relevance and availability. In the present study, the participant and the confederate take the part of both judge and target. In order to make her rating of the participant's emotional expressiveness, the confederate would have been acting as the judge with the participant as the target. In order to make a prediction about how much she thought the confederate liked her, the participant would have been acting as the judge with the confederate as the target. However, as illustrated in ELLE, the participant's prediction is dependant, in part, on the outcome of the confederate's judgement of her. Therefore, the intrapersonal factors relating to both judge and target are possible sources of age differences.

First, as targets, the *relevance* of the participants' emotional expression to their emotional experience and the *availability* of emotional cues may be a function of age. The increasing: ability to self-regulate emotion (Labouvie-Vief, et al., 1989); awareness of their own emotional states (Hauser & Safyer, 1994); self-confidence (Helbing, 1984); willingness to self-disclose to others with a related decrease in self-consciousness (Adams, et al., 1987); and psychological adjustment (Colvin, 1993) of adolescents as they get older will all contribute to the relevance of emotional expression to emotional experience and to the availability of emotional cues.

Second, as judges, *perceptiveness* and the *utilisation* of available cues may also be a function of age. As adolescents increase their knowledge of others' perspectives and become less egocentric, their ability to perceive emotional cues in others will increase (Barenboim, 1981; MacLennan & Jackson, 1985; O'Mahoney, 1986). Similarly, the development of a coherent personal identity will result in fewer biases in the interpretation of those cues. An increased knowledge about the meanings of emotional cues, increased confidence in their

judgements and a more accurate theory about themselves will help to correct the cognitive biases that could lead to misinterpretations of the emotional cues provided by others.

For the various plausible intra- and inter-personal explanations outlined above, Hypothesis 5 was supported.

4.7 Conclusions

From the results of this study, an integrated model (ELLE) was developed that incorporated the well-known models of Kenny (1994), Cappella (1993) and Funder (1995). ELLE depicts the considerable number of cognitive, emotional and behavioral processes involved in an ingratiation task, and relates them by uni- and bi-directional paths. While ELLE apparently illustrates these processes as happening in a serial fashion, it is more likely that many happen in parallel and simultaneously. Undoubtedly, difficulties with establishing the direction of causal paths is due in part to this complexity. What may be required is a model that incorporates reciprocal, bi-directional influences as a matter of course, e.g., a dynamic systems model.

A summary of the processes involved in the ingratiation task must include the following: In an attempt to infer what the confederate thought of them, participants directly observed their own thoughts, emotions and behavior, and by assuming that others see them the same way that they do, they made inferences from those observations about the confederate's perceptions of them. In addition, participants looked to the confederate for feedback about their behavior. This study adds a third dimension to the dyadic situation, that is, the self-regulation of emotional states and expressions. The present research proposes that ingratiation strategies might have elevated the participants' mood, either directly by the self-induction of positive mood or indirectly via the use of display rules, and thereby influenced participants' liking ratings. When it came to ingratiating themselves with the confederate,

adolescents manipulated their emotional states in order to match their emotional experience with their emotional expression. This happened either directly by positive mood induction via cognitive processes, or indirectly by the adoption of display rules that provided facial feedback to emotion.

ELLE clarifies the relationship between experienced and expressed positive emotion during the ingratiation task, integrating the work of researchers who: have found that people attempt to make their experienced emotion as congruent with their expressed emotion as possible (Hochschild, 1983; Parkinson, 1991; Wegner & Erber, 1992); have found that people look for cues to others' perceptions of them within themselves (Kenny, 1994); have found that people look for cues to others' perceptions of them within their dyadic partners (Shrauger & Schoeneman, 1979); have developed a model of person-perception accuracy (the RAM model of Funder, 1995); espouse the facial feedback hypothesis (Adelman & Zajonc, 1989; Cappella, 1993; Hess, et al.,1992); and have investigated the phenomenon of behavioral matching (Cappella, 1997; Gergen & Wishnov, 1965; Newtson & Czerlinsky, 1974; Schlenker & Goldman, 1982,).

The effects of age on the processes contained in ELLE have been demonstrated in two ways, namely that participants' age was positively related to their emotional expression and their age was negatively related to their accuracy about the confederate and the observer's affective ratings of them. Whether these effects were due to the intrapersonal factors related to the participants (e.g., self-disclosure, perceptiveness, confidence, psychological adjustment) or the intrapersonal factors related to the confederate and the observer (e.g., expectancy and/or similarity effects) are questions that are unlikely to be answered, since it is likely that a combination of these factors contributed simultaneously to the relationships that were demonstrated.

While there may well be other explanatory theories that could account for the results of this study, it is considered that the explanatory breadth, simplicity

and analogy of ELLE makes it an attractive option. These three evaluative criteria have been proposed by Thagard (1992) as suitable for comparing competing theories.

4.8 Limitations of the present research

There are a number of limitations in the present research that affect the generalisability of the findings, for example, sampling biases . While this is the case with any research, it is useful to point out those limitations that have been identified in order to inform future research in the area. In addition, there are limitations in the design of this study that may have affected the findings, for example, possible confounding variables and the cross-sectional nature of the study.

While the age group chosen for this study may limit the generalisability of the findings, there is an obvious *sampling bias* in terms of sex and socioeconomic status. These three demographic variables have been shown to impact on psychological functioning in a number of areas, and may well have influenced the findings. First, the particular developmental tasks inherent in adolescence might have produced the findings, rather than age itself. Although infrences were made about their existence, this study could not identify the underlying factors that produced the observed age differences. A sample of children in middle-childhood may not have demonstrated the relationships with age produced in this work. Second, females have been shown to be more emotionally aware and expressive than males (Dunn, Bretherton & Munn, 1987; Sarni, 1989). However, any differences between boys and girls are more likely to be mean-differences rather than differences in the correlations. It can reasonably be expected that the developmental sequence would obtain in a sample of adolescent boys, but the intensity of emotion expression might be less. Additionally, the fact that this was a same-sex interaction and not a between-sex interaction might have affected the intensity of emotional expression. Third, low-income children have been shown to be less prosocial

than middle-income children in some studies (e.g., Raviv & Bar-Tal, 1981) and more prosocial in other studies (e.g., Knight & Kagan, 1977). The current work involved only middle-upper income children and, therefore, more research is needed in order to establish the relationship between socio-economic status and social functioning.

One of the possible *confounding variables* in the present study was the age of the confederate. It has been suggested in the discussion that the younger children might have been emotionally inhibited by an interaction with someone far removed in age and status, whereas, for the older children, this difference might be greatly reduced. It could be that, if the participants had all interacted with an early adolescent, the results might have been quite different, with the older participants being inhibited by the difference. It remains for future research to examine this possibility. However, the present research does offer an insight into how adolescents interact differentially with an adult stranger. Considering that, during adolescence, children are likely to be interacting with a number of adults, for example, teachers, coaches or employers, the present findings offer some illumination of the interactions that might happen in any ingratiation situation between an adolescent and an adult.

The *cross-sectional design of the study* raises the question as to whether the developmental sequence identified (that children become more emotionally expressive as they get older) might be a function of individual differences between the children. Perhaps this group of 17-18 year olds were particularly expressive at the age of 11-12, and that this group of 11-12 year olds will be particularly inexpressive when they are 17-18. It would be necessary to conduct a longitudinal study in order to confirm that the developmental sequence, does, in fact, exist.

4.9 Implications of the present research and directions for future research

Directions for future research can be recommended from three different sources in the present research. One source is related to the alternative explanations generated in the discussion. *Ambiguity of results* may demand first, replication and/or second, more fine-grained investigation of the empirical phenomena in question. The third source is the possible *application of the findings* of this research, conceptually or practically.

In terms of the ambiguity of results, two particular issues are raised by the discussion section of this thesis. First, ELLE needs to be tested under conditions where the emotional expressions of the confederate are predominantly negative, in order to further clarify the effects of this variable on the dyadic system. It might be established that the self-induction of positive emotion would override the effects of that negative expression, or alternatively, that the emotion content of the whole system would become negatively valenced. Second, more research is needed to explicate the cause of the mood elevation during the interaction task. While it was argued that hypothesis 3 (that participants would self-induce positive mood) could be supported, more fine-grained analysis of this phenomenon is necessary to make the relationship between ingratiation and mood explicit.

In terms of applications of the findings, one conceptual implication and one practical application are considered. First, one of the conceptual implications of the present research concerns the difficulties in making explicit the direction of the causal processes within a system. Thus, rather than insisting that the causal mechanisms contained in a system transmit influences in a particular direction, it may be more productive to characterise those mechanisms in terms of their contribution to the functioning of the system as a whole.

Woodward (1989) has examined the limitations of the standard approach to scientific explanation which appeals to the causal mechanisms involved in the production of behavior. He cites examples of physical systems with many interacting processes where, "it is often hopeless to try to understand the behavior of the whole system by tracing each individual process. Instead one needs to find a way of representing what the system does on the whole, or on the average, which abstracts from such specific causal detail" (pp. 362-363). In the present research, the complex interactions between the processes described in Figures 4 and 5 make attempts to trace the direction of the causal paths involved in the system extremely difficult. While there is evidence for the effects of cognition on emotion (e.g., Lazarus (1982) appraisal theory of emotion), the effects of behavior on emotion (e.g., the facial feedback hypothesis), the effects of emotion on behavior (e.g. Baumeister, et al., 1994), and the effects of emotion on cognition (e.g., mood congruency effects), questions remain about causal order in these causal paths.

It may be that it is enough to explicate and understand the causal mechanisms contained in a model like ELLE and be able to make general predictions about how the system, as a whole, will operate when one or other of the causal mechanisms changes, rather than attempt to determine the causal order of the mechanisms. Dynamical systems theory, as explicated by Kellert (1993), provides a means of modeling any dynamical system without having to undertake the impossible task of accounting for the direction of every causal mechanism. The attraction of dynamical systems theory for psychologists is the ability to foresee and understand changes in the overall behavior of a system rather than having to predict the exact value of some property of the system. It may be enough to know the constituents of the system, without precisely tracing their causal paths, because a core assumption of systems theory is that a change in any one of the constituents will change the behavior of the system as a whole. In relation to the present research, an important line of future work would involve establishing the effects of positive emotion expression on liking, rather than attempting to determine the causal order of processes like cognition,

emotional experience and emotion expression. By accepting that all variables interact with each other in complex and sometimes unpredictable ways, it is still possible to understand the system in terms of its properties and its functioning, providing foci for intervention when the system becomes unstable. While the application of dynamical systems theory to psychology is still in its infancy (e.g., Ayers, 1997), and it is not without its problems (e.g., Kincanon & Powel, 1995), there may be valuable lessons to be learned and applied by considering the methodological and conceptual issues involved in dynamical systems theory. In any case, the use of diverse methodologies will give psychology a better chance of developing complementary understandings of the phenomena under investigation. In sum, one sensible approach to modeling will be to lay out the causal mechanisms contained in a particular system without an emphasis on establishing causal order.

Second, there are potential implications for clinical psychology in this research. Clinical populations tend to have more interpersonal difficulties than nonclinical populations (Bosch, Schlebusch & Wessels, 1987; Claiborn & Lichtenberg, 1989) and difficulties with the self-regulation of emotion (Parker, Taylor, Bagby & Acklin, 1993; Shearin & Linehan, 1994; Telch, 1997). Clinicians' efforts are generally concentrated on providing clients with the skills to regulate negative emotion (Andreoli, et al., 1995; Linehan & Kehrer, 1993), and little attention is paid to the induction of positive emotional states. If it is assumed that the expression of positive emotion (particularly when it is matched by emotional experience) makes people likable, then there is some justification for teaching clients with psychological difficulties to self-induce positive emotion in order to feel better and be more effective interpersonally. While it may be argued that experimentally induced mood is short-lived (Seibert & Ellis, 1991), future research could help to develop methods that would result in longer-lasting changes. For example, Seibert and Ellis (1991) found that the more self-referencing and/or self-evaluating a mood induction technique is, the more likely an intense and meaningful emotional mood state will be produced. It is

hoped that future research will identify factors that would make induced mood last longer.

Relatedly, too little attention has been given to the study of positive emotions during adolescence (Wagner, 1996) and clearly more research in this area is needed. Researchers are becoming increasingly aware that poor relationships in adolescence are predictive of social incompetence and maladjustment in adulthood (Cassidy & Lynn, 1991; Cole, et al., 1989; Feehan, McGee, Williams, & Nada-Raja, 1995; Rotheram-Borus, 1989; Schonert & Kimberly, 1993). The available literature tends to concentrate on negative emotion in adolescence rather than positive emotion. More fine-grained investigations of the variables contributing to adolescent positive emotion (e.g., identity development, emotional repertoire, cognitive development) are needed in order to understand the constituents of the social systems of which adolescents are a part.

While the present research has something to say about positive emotion in adolescence within a non-clinical population, future research with a clinical population of adolescents is necessary in order to establish whether there are differences in system functioning between the two populations. It may be that there are psychological mechanisms at work in clinical populations that prevent/modify the self-induction of positive emotion.

The present research has supported a number of hypotheses about the experience and expression of positive emotion during ingratiation among adolescents. It is hoped that it will also encourage further research in the area of adolescent social functioning. Gaining a better understanding of this area, and designing possible interventions for those who find social interaction particularly difficult, are two endeavors that deserve considered attention.

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Appendix A. Information sheet and Consent Form

Dear Parent and Student,

Project Title: The Likability of Strangers

I am conducting research for my Master's Degree at the University of Canterbury. I am concurrently completing the postgraduate Diploma of Clinical Psychology at the same institution.

I am conducting a research project that looks at the development of children's ability to interact socially. Investigating the way that children develop knowledge about social interactions (in detail) gives us a better understanding of how this ability develops.

I would like to include your daughter in my study. Gillian Heald and members of the staff at Rangi Ruru School have reviewed the project, and they believe that it poses no threat to your daughter's well-being. The project has also been reviewed and passed by the University of Canterbury's Human Ethics Committee. In order to include your child, I need your written consent and her consent (see consent form).

In this study, each girl will be seen individually by myself for an initial period of time and will then be introduced to an adult female whom she has not met before. She will have a 5-minute interaction with the stranger, which will be videotaped. At various stages during the experiment, each girl will be asked to write down a list of her thoughts and feelings.

If at any time your daughter expresses a desire not to continue, she will be free to return to her classroom. The research literature suggests that young people generally enjoy taking part in experiments of this kind, and I would like to assure you that your daughter will receive only positive feedback during the experiment.

Of course, all information that I gather will be kept confidential. Biographical details will be stored separately from the experimental data and no biographical details will be used in publications that may arise as the result of this research. It is important for you to know that it is the performance of the group as a whole that is to be reported, not your daughter's individual contribution.

If you would agree to allow your daughter to participate in this study and she would like to, please sign the consent form below and ask her to sign it. I also require the biographical details that accompany the consent form. I would greatly appreciate your reply by Monday 18th August. Simply return the form to your daughter's form tutor or the school office and I will collect it.

Thank you for your help with this project. If you have any questions about the study, please do not hesitate to contact me.

CONSENT FORM

I have read and understood the description of the project "The Likability of Strangers". I have discussed the project with my daughter and believe that she understands it. On this basis, I agree to allow my child to participate in the study, and I consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that my daughter may withdraw from the study at any time, including the withdrawal of any information provided.

Parental consent

I agree to allow my daughter, _____
to participate in the study described above.

I do not agree to allow my daughter, _____
to participate in the study described above.

Signed: _____ Date: _____
(Parent)

(Please print)

Your daughter's full name: _____

Your daughter's Birth Date: _____

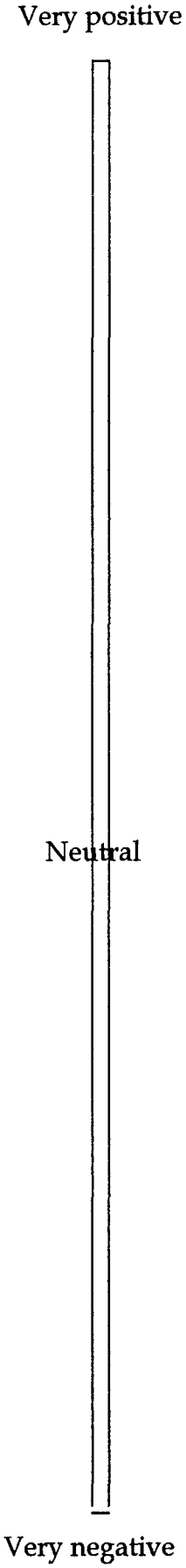
Student's Consent

I, _____ agree to participate in the study described above.

I, _____ do not agree to participate in the study described above.

Signed: _____ Date: _____
(Student)

Appendix B. Mood Thermometer



Appendix C. Planning Thoughts List

Planning Thoughts List

I am interested in the plans you are making in order to get the stranger to like you. I want you to think about what you will say and do, and what feelings inside you will help to make her like you, for example, being sad, angry, happy or excited. Simply list the plans as they occur to you, the first one in the first box, the second in the second box and so on. Please put only one plan in each box. Don't worry about grammar or spelling, just write down your plans. You will be given 2 minutes to complete this task. Don't worry about filling all the boxes - I've given you more than I think you will need. Please be honest (there are no right or wrong plans).

Appendix D. Interaction Thoughts List

Interaction Thoughts List

I now want to know what you were thinking and feeling during your time with Meg. Simply list the thoughts and feelings as you remember them, the first one in the first box, the second in the second box and so on. Please put only one thought or feeling in each box. Don't worry about grammar or spelling, just write down your thoughts and feelings. You will be given 2 minutes to complete this task. Don't worry about filling all the boxes - I've given you more than I think you will need. Please be honest (there are no right or wrong thoughts and feelings)

Appendix E. Making Friends Rating Scale

Making Friends Rating Scale

(Participant)

Please think about the time you spent with the stranger and answer the following questions. Choose a number between 1 (not at all) and 7 (very much) to answer each question and put a circle around the number you choose.

	Not at all						Very much
1. How much do you think the stranger liked you?	1	2	3	4	5	6	7
2. How much do you think you smiled?	1	2	3	4	5	6	7
3. How friendly do you think you appeared?	1	2	3	4	5	6	7
4. How natural do you think you appeared?	1	2	3	4	5	6	7
5. How encouraging do you think you appeared?	1	2	3	4	5	6	7
6. How much do you think you talked?	1	2	3	4	5	6	7
7. How happy do you think you appeared?	1	2	3	4	5	6	7
8. How warm do you think you appeared?	1	2	3	4	5	6	7
9. How much eye contact do you think you made?	1	2	3	4	5	6	7
10. How positive do you think you appeared?	1	2	3	4	5	6	7

Appendix F. Complete Script for Procedure

Hi,——— come in. (Show her to her seat).

I'm Fran and I'm going to be doing the research with you today. I'm doing a Master's degree at the University of Canterbury and also training to be a clinical psychologist. What class are you missing now? What other courses are you doing? We are going to be doing a variety of different tasks today and I hope that you find them interesting and fun.

The first thing I want to do is for you to think about how you are feeling right now. I have a mood thermometer that goes from very negative (the worst you ever felt in your life) to very positive (the best you ever felt) with neutral (not particularly good or bad) in the middle. Make a line across the thermometer to show how you are feeling right now. Good. I will be asking you to mark a "thermometer" another 3 times during our time together. Each time you do it, I want you to record your feelings at THAT moment, without thinking about how you felt the last time.

In a few minutes, I will introduce you to someone whom you have not met before. What I want you to do is try and get her to like you. She doesn't know that you are trying to get her to like you - all she knows is that she will spend 5 minutes getting to know you. So I don't want you to say anything about what you're trying to do. You will have 5 minutes with her, and I will be videotaping your meeting so that I can watch it later. I'm interested to see what sorts of things you do to get her to like you. We all do things to get people to like us, but most of the time, they're automatic and quite difficult to put into words. So now I'm going to ask you to take a few minutes and think about how you will go about getting her to like you. I want you to think about what you will say and do, and what feelings inside you will help to make her like you, for for you to record your plans. Please read the instructions at the top of this page and then I will give you 2 minutes to fill in the boxes. Now I would like you to mark a thermometer with how you are feeling right now.

Neutral Mood Induction: Let's take a little time to settle into this. As a way of familiarising yourself with this room, I would like you to describe the room in as much detail as you can. Please name all of the things you can see

and tell me how many there are of each. OR *Positive Mood Induction:* Let's take a little time to settle into this. I want you to tell me something that makes you very happy, something that really makes you feel good. (subject gives example). That's right, ...is really fun/exciting. You feel really good when.....Now I want you to think about how good you feel when..... Think really hard about .....Tell me all the good feelings you have when.....Now I would like you to mark the thermometer again with how you are feeling right now. (Note change of mood - if no change, repeat induction and mood rating).

(Fetch confederate)—— This is Meg, Meg, this is ——. I'm going to switch the videotape on and make sure it's working. Good. See you in 5 minutes. (Re-enter room, switch off video). Thanks Meg. (confederate leaves).

Now, for the last time, I would like you to mark the thermometer again. Thank you. There are two more things to do before we finish.

The first one is for you to fill out this questionnaire (Making Friends Rating Scale). Read the instructions at the top and then answer the questions. Now I want to know what you were thinking and feeling while you were with Meg. Read the instructions at the top of this form, and I will give you 2 minutes to fill in the boxes. Thank you.

Well —— that's it! But before you go, there are 2 things I want to check out with you. First, I need to ask you not to discuss what we did today with anyone who hasn't been yet. As you can imagine, if they did know, it might interfere with the way they might behave during the experiment. As soon as the whole experiment is finished you can talk about it with anyone. I will also be sending you a letter explaining exactly what I was hoping to achieve. Second, how did it go with Meg? It's important that you leave here feeling good. It has meant a lot to me that you took the time and trouble to help me with my work, and I want you to know that you have made a really valuable contribution. I hope that you found it interesting and fun.

Appendix G. Examples of thoughts and feelings from planning and interaction thought listing tasks

Examples of thoughts are presented in 6 categories:

1. Positive planning behaviors: Smiling; looking at her; making eye contact; involving her; asking about her; talking; laughing; don't fold arms; make her feel at ease; good body language; don't slouch; crack jokes; don't show off.

2. Postive planning feelings: Confident, interested/not bored; happy; warm; friendly; open/not secretive/not shy/not reserved; relaxed/not nervous/laid back/casual/don't worry/not afraid; welcoming; positive/not negative; cheerful/not grumpy/bubbly/not depressed; myself/natural; good feeling; encouraging/not critical/not judgemental; polite; approachable; comfortable; helpful; kind.

3. Positive thoughts about the task: Pleasant person; cheerful person; I wanted to carry on; she looked interested; we got on well; she was encouraging; we chatted a lot; I thought of heaps of things to say; it was fun.

4. Negative thoughts about the task: I seemed a bit too eager; I'm a really boring person; I felt I was coming across a bit negative; I don't want to sound stupid; I felt she didn't like me; what am I going to say next; I felt I talked too much; what happens if she doesn't start talking.

5. Positive feelings about the task: Happy; encouraged; fine; relaxed/not nervous; interested; enjoying myself; curious; excited; positive; comfortable; calm; assured; pleased.

6. Negative feelings about the task: Self conscious; nervous; uncomfortable; unnatural; embarrassed; flustered; scared; awkward; edgy; anxious; worried; unsure; shy.

Appendix H. Debriefing Information

Debriefing information

When we are interacting with other people, emotional skills are called into play. The range of necessary emotional skills includes (among many other things) the ability to change our feelings.

I think that the actions we take in order to achieve social goals (e.g. getting to know a stranger) work better when our feelings match those actions. For example, in order to make a new friend, we need to feel positive. On the other hand, in order to be stand up to the bully in the playground, some negative feeling (for example, feeling that the other person is being unfair) may be needed to help us to achieve that goal.

People who have psychological problems often have difficulties when interacting with other people. If I can show that changing our feelings to match the social goals we have helps us to have better social interactions it may be possible to teach people how to achieve this.

During our experiment, I measured your mood (how you were feeling) a number of times. For some of you, I got you into a happy mood by talking about something that made you happy. For others I got you into a neutral mood (neither positive nor negative) by having you describe the room. Then I got you to rate your mood after you had planned your encounter with the stranger. This was to see whether you put yourself into a positive mood so that you could achieve the goal of getting her to like you. I also got the stranger (and 2 other people who watched the videotapes) to rate how effective the interaction was.

When I do the statistics on all of the information I have, I will be looking at the average scores of each group to see if being in a positive mood does make social interactions better.